

AD _____

GRANT NUMBER DAMD17-96-1-6300

TITLE: The Impact of Deployment on Navy Women and Their Families

PRINCIPAL INVESTIGATOR: Michelle L. Kelley, Ph.D.

CONTRACTING ORGANIZATION: Old Dominion University
Research Foundation
Norfolk, VA 23508-0369

REPORT DATE: October 1997

TYPE OF REPORT: Annual

PREPARED FOR: Commander
U.S. Army Medical Research and Materiel Command
Fort Detrick, Frederick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for public release;
distribution unlimited

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

DTIC QUALITY INSPECTED 2

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE October 1997	3. REPORT TYPE AND DATES COVERED Annual (15 Sep 96 - 14 Sep 97)	
4. TITLE AND SUBTITLE The Impact of Deployment on Navy Women and Their Families			5. FUNDING NUMBERS DAMD17-96-1-6300	
6. AUTHOR(S) Michelle L. Kelley, Ph.D.				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Old Dominion University Research Foundation Norfolk, VA 23508-0369			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Commander U.S. Army Medical Research and Materiel Command Fort Detrick, Frederick, Maryland 21702-5012			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200) The objective of this research was to investigate the effects of intermittent, military-induced separation on women and their children and to identify factors that may mediate the effects of separation. Sixty single and married mothers of 1- to 6-year-old children were interviewed, completed questionnaires, and a home-based modification of the Strange Situation before and after a scheduled six-month military-induced separation; 60 military mothers assigned to shore duty served as a control group. At midpoint, the child's primary caregiver was interviewed and completed the measures of child behavior and child temperament. Before, during, and after separation, the child's child care provider completed measures of child behavior and temperament. This research has the following aims: 1) Develop knowledge of the effects of deployment on women and their children; 2) Identify areas in which the effects of separation on women differ from findings on military men; 3) Identify areas in which the effects of deployment are similar to men; 4) Identify factors that may mediate the effects of separation; 5) Examine relations between the effects of deployment and intentions to reenlist; and 6) Make recommendations that may improve the quality of deployment programs and other services for women and their families.				
14. SUBJECT TERMS Defense Women's Health Research Program Deployment Family Issues Child Care Stress Attachment Retention			15. NUMBER OF PAGES 139	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited	

FOREWORD

Opinions, interpretations, conclusions and recommendations are those of the author and are not necessarily endorsed by the U.S. Army.

MLK Where copyrighted material is quoted, permission has been obtained to use such material.

N/A Where material from documents designated for limited distribution is quoted, permission has been obtained to use the material.

N/A Citations of commercial organizations and trade names in this report do not constitute an official Department of Army endorsement or approval of the products or services of these organizations.

N/A In conducting research using animals, the investigator(s) adhered to the "Guide for the Care and Use of Laboratory Animals," prepared by the Committee on Care and Use of Laboratory Animals of the Institute of Laboratory Resources, National Research Council (NIH Publication No. 86-23, Revised 1985).

MLK For the protection of human subjects, the investigator(s) adhered to policies of applicable Federal Law 45 CFR 46.

N/A In conducting research utilizing recombinant DNA technology, the investigator(s) adhered to current guidelines promulgated by the National Institutes of Health.

N/A In the conduct of research utilizing recombinant DNA, the investigator(s) adhered to the NIH Guidelines for Research Involving Recombinant DNA Molecules.

N/A In the conduct of research involving hazardous organisms, the investigator(s) adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories.

Michelle L Kelly 9/17/97
PI - Signature Date

TABLE OF CONTENTS

Title Page	1
 Section A: REQUIRED SUBMISSION DOCUMENTS	
Standard Form 298.....	2
Foreword	3
 Section B: TABLE OF CONTENTS	
Table of Contents	4
 Section C: INTRODUCTION, METHOD, RESULTS, AND CONCLUSIONS	
1.0 Introduction.....	6
1.1 Background.....	7
1.2 Goals.....	8
2.0 Experimental Methods	
2.1 Sample	13
2.2 Measures	16
2.3 Interview Coding.....	21
2.4 Procedure.....	21
3.0 Results	
3.1 Data Analysis.....	23
4.0 Conclusions	25
 Section D: REFERENCES	
Bibliography	27
 Appendices	
A. Predeployment Interview (Deployment Subjects).....	34
B. Initial Interview (Control Subjects).....	43
C. Questions Regarding Shipboard Pregnancy	51
D. Mid-deployment Interview (Deployment Group)	52
E. Mid-deployment Interview (Control Subjects)	55
F. Postdeployment Interview (Deployment Subjects).....	57
G. Final Interview (Control Subjects).....	68

TABLE OF CONTENTS (Cont.)

Appendices

H.	90-Item Attachment Behavior Q-Sort Scale	75
I.	Maternal Separation Anxiety Scale.....	78
J.	Perceived Stress Scale	81
K.	Career Salience Questionnaire.....	83
L.	Maternal Role Investment Scale.....	86
M.	Center for Epidemiologic Studies-Depression Scale	88
N.	14-Item Anxiety Questionnaire	89
O.	Colorado Childhood Temperament Inventory.....	90
P.	Child Behavior Checklist (2/3).....	91
Q.	Child Behavior Checklist (4-16).....	93
R.	Background Questionnaire (Final Interview)	95
S.	Coding for Predeployment Interview (Deployment Subjects).....	99
T.	Coding for Initial Interview (Control Subjects).....	107
U.	Coding for Ship-Board Pregnancy Questions	114
V.	Coding for Mid-Deployment Interview (Deployment Subjects)	116
W.	Coding for Mid-Point Interview (Control Subjects).....	120
X.	Coding for Postdeployment Interview (Deployment Subjects).....	122
Y.	Coding for Final Interview (Control Subjects).....	133

1.0 INTRODUCTION

In 1993, Congress mandated the Defense Women's Health Research Program (DWHRP) to address the health-related needs of women in the military. An Institute of Medicine publication (1) in response to the mandate specified that program activities address research supporting the "impact of family issues on the servicewomen under conditions such as mobilization, deployment, and training or traumatic incidents (e.g., repeated or long periods of separation from children resulting from deployment; lack of adequate or affordable child care; concerns about family well-being; and problems meeting family needs related to low income)."

Although it is becoming increasingly common for the active duty mother to leave the family either temporarily or for extended periods of time, little empirical research has addressed this issue. The development of the current database will provide the first longitudinal studies of the effects of deployment on Navy women and their families. This report describes the progress of the project, which is currently ongoing, as well as initial results from this project.

The specific technical objectives of the present project are to: 1) Develop accurate knowledge of the effects of long-term separation on women and their children; 2) Identify specific areas in which the effects of long-term separation differ from previous findings related to men in the military; 3) Identify areas in which the effects of long-term separation are similar to previous findings on men in the military; 4) Identify factors that may mediate the effects of work-related separation on Navy women and their families; 5) Examine relations between the effects of deployment and the servicemember's intentions to reenlist; and 6) Make recommendations that may improve the quality of predeployment programs and other services for women in the military and their families.

1.1 Background.

Work-related separations are a part of many occupations. Unlike non-military families, however, Navy families experience cycles of departure-absence-return (known as deployments) throughout the course of military service.

Studies examining the effects of military-induced separation on deploying fathers and their families demonstrate that cognitive and behavioral changes accompany prolonged periods of separation. A cyclic pattern of depressive behavior has been demonstrated in Navy wives and children, with higher levels of depressive mood and behavior reported prior to and during the deployment than at postdeployment (2,3,4,5,6,7). Some women reported increased anxiety, emotional withdrawal, and disruptions in parenting rules and expectations for children during the deployment period (e.g., 4,5,8,9).

Reintegration of an absent member back into the family is a concern as well. Deploying fathers report disrupted communication patterns, feeling "out of sync" with the rest of the family, missing developmental milestones in their children's lives (e.g., first words, birthdays), losing their authority within the family, and the challenge of maintaining strong parent-child attachment given frequent absences (10).

Non-Traditional Families Experiencing Periodic Separation

In 1996, 77.5% of women with school-aged children were in the labor force (11). The entrance of women into the workplace and the decrease of the traditional nuclear family are cultural trends that have resulted in changes in the composition of the work force and in family life.

As of September, 1996, there were 447,120 active duty military women (12). Currently, 14 percent of the total active duty personnel and 16 percent of reservists are women. This percentage is expected to rise to 20 percent in the near future (1). Similar to other branches of the military, there has been a steady increase in the number of female Navy personnel. In part this is due to the expanded role of women in nontraditional occupations within the service and their recent assignment to combat vessels.

Although our understanding of military-induced separation has increased in traditional father-deployed families, noticeably absent from the literature are references to Navy mothers or single parents who experience work-related separations. It is imperative to address these issues since an increasing number of women are choosing military careers requiring frequent separation, the majority of active duty women are at the peak of their reproductive years, and approximately 59% of female military personnel are single (13). Single parents are allowed to remain on active duty; however, single (and married) parents must be able to perform their military responsibilities without interference and be available for duty when and where the military needs them. Additionally, these issues are expected to become more important as the percentage of women in the military increases. Moreover, by understanding these issues, it is possible to develop programs and policies that help reduce the turnover rate for women and therefore increase "readiness" of the military forces.

1.2 Goals.

The present proposal will examine several general issues, as well as specific questions regarding the impact of deployment on military women and their families. The first goal is to develop accurate knowledge of the effects of long-term separation on women and their children. Specifically, several variables are examined that are believed to be significant for military women experiencing deployment: disruptions in the mother-child attachment relationship, maternal separation anxiety, child behavior and child temperament, career salience, maternal role investment, perceived stress, psychological well-being, concerns regarding child care, quality of child care, child care experiences, and child care costs.

The literature is reviewed on military men with the intention of examining the ways in which the effects of long-term separation on military women may be similar and different than military men. In particular, attention is paid to factors that may mediate the effects of work-related separation on Navy women and their families. Additionally, relations between the effects of deployment and other aspects of military service and the servicemember's intentions to reenlist are examined.

Mothers and Work-Related Separation

Women have traditionally borne the responsibility for child care (14) and have strong normative commitments to their maternal roles (15). In an article discussing frequent corporate travel, women reported reliance on husbands to care for children as a central concern (16). Job-related separations often occur when children are young and families have increased need for time together (17). This is the time when mothers are especially concerned about attachment issues (18). Moreover, separation may invoke greater attachment issues for women than men (19). Interestingly, however, most studies of the effects of disrupted attachments in military families have focused on the father's absence. This is surprising given that an increasing number of active duty mothers are experiencing temporary or extended periods of separation, that separation may be more complicated for military women than military men, and that 35% of female parents are single (20). For instance, Army reserve nurses anticipating mobilization during Operation Desert Storm identified separation from loved ones and financial concerns as the largest contributors to anxiety. Anxiety was higher for women with children and many of these women expressed concern regarding child care in the event of mobilization (21).

One theoretical construct which appears to have major implications for the study of periodic separations is that of attachment theory. Numerous studies have endorsed Bowlby's (22,23,24) ethological perspective which stipulates that a major requirement of a secure attachment mother-child relationship is the availability of a warm, responsive caregiver. Specifically, the role of the attachment figure is to be sensitive, available, and responsive to the child, and to provide comfort and safety in times of stress and danger. This allows the child to comfortably explore and master the environment. Studies have suggested that attachment is fairly stable over time (25,26). Significant life events, however, may result in changes in perceived attachment and attachment behaviors (26,27,28). Some have even suggested that maternal employment, particularly during the first year of life, may interrupt the development of the mother-infant bond (29).

Descriptive studies suggest that military-induced separations disrupt father-child attachment. After returning, military fathers report being out of "sync" with children (4,30). Interestingly, Navy women returning from a deployment reported similar concerns (6).

Military-induced separation is a significant event for both the Navy mother as well as her children. During separations the Navy mother is unable to fulfill her role as the primary attachment figure. Although deployments and separations are finite, they occur repeatedly throughout the course of military service. These separations generally occur when children are young, and even short separations account for a significant proportion of a young child's life. Moreover, these separations occur while the child's attachment to the primary caregiver is evolving. Consequently, military-induced separation may, at least temporarily, diminish the mother-child attachment relationship. Specifically, for Navy women experiencing deployment, mother-child attachment behaviors and mothers' and experimenters' perceptions of the mother-child attachment relationship are expected to decrease at postdeployment as compared to predeployment.

In order to address the attachment relationship over time, the two most widely accepted methods of assessing mother-infant attachment, a modified version of the Strange Situation and the Attachment Behavior Q-Set Scale (31), are being administered prior to and after deployment and at similar intervals for the non-deploying control group. The modified version of the Strange Situation (for use in the home) is being scored according to standardized coding procedures (32) to yield a quantifiable statement about the child's interaction with his or her mother and with a stranger in terms of the following behavioral categories reflecting attachment behavior: contact-maintaining, proximity-seeking, contact-resisting, proximity-avoiding, and search behaviors. Additionally, both mothers and experimenters are completing the Attachment Behavior Q-Set Scale which provides an index of the child's security to the mother. The Attachment Behavior Q-Set is being completed prior to and after deployment for Navy mothers and at similar intervals for non-deploying Navy women serving as controls.

Maternal Separation Anxiety and Mother-Child Attachment

Recent research has focused on the consequences of maternal separation for the mother. Studies of mothers' feelings about separation have focused on maternal separation anxiety, defined by Hock and colleagues as an unpleasant emotional state that may be evidenced by expressions of worry, sadness, or guilt (33). Studies of civilian men have shown that working fathers and mothers had similar levels of separation anxiety (34,35). As might be expected, military men experiencing extended separations from family members report separation anxiety. Their difficulties often center about worry, guilt, shame, and concerns about the disruption of primary family relationships (36). Similar to their male counterparts, separation anxiety is a primary concern for military women. Separation from children was a major concern for Army reserve nurses during Operation Desert Storm. Navy mothers about to deploy reported considerable separation anxiety. These concerns were especially prevalent for single Navy mothers. In part, the greater concerns of single women may reflect less continuity in caregivers (6). These concerns may be well-founded as children's experiences during parental separation are related to the adequacy of family supports (37) and the availability of surrogate parental models (38).

In the present research, maternal separation anxiety is expected to be greater at preseparation than at postseparation for the Navy mothers experiencing deployment, and for single women experiencing separation versus married women.

For military mothers experiencing deployment, perceived attachment and attachment classification may be related to maternal separation anxiety. Specifically, in her research, Ainsworth identified three types of mother-infant attachment: secure, anxious-resistant, and avoidant. The "secure" child uses the mother as a base from which to explore his or her environment, is self-sufficient during a temporary separation from the mother but welcomes the mother upon return. The anxious-resistant child demonstrated significantly more distress and anxiety than the secure child both when the mother was present and absent and was ambivalent upon the mother's return. The avoidant child was not distressed by the mother's absence and tended to ignore the mother upon return. Research has shown that "avoidant" mothers are less likely to acknowledge negative maternal emotions (39). In the present research, it is expected that distant mothers with "avoidant" infants should report lower levels of separation anxiety than mothers of securely attached or anxious-resistant infants.

Maternal separation anxiety is being assessed through use of the Maternal Separation Anxiety Scale (40). Specifically, concerns about separation are being assessed both prior to and after deployment and at similar intervals for the non-deploying control group. These scores are being related to both infant classification as identified through the modified Strange Situation Behavior Index and the mothers' and experimenters' perceptions of the security of the child as determined from the Attachment Behavior Q-Set. This methodology will identify relations between maternal separation anxiety and attachment behavior as well as relations between maternal separation anxiety and mothers' perceptions of the security of the mother-child attachment relationship.

Relations between Career Salience, Maternal Role Investment, Quality of Child Care and Child Experiences and Maternal Separation Anxiety and Psychological Well-Being

Many mothers who work must attempt to resolve work-related separation concerns (41). Understanding factors that are related to military women's separation concerns and psychological well-being is particularly important because military women face temporary and extended separations from families as well as hazardous duty and the threat of or actual military conflict. Additionally, the role of a sailor and a mother are, for the most part, mutually exclusive. Moreover, research examining wartime stress demonstrated that female personnel were more symptomatic in the initial postdeployment phase than male personnel (42). Also, women soldiers deployed during Desert Storm were more likely to be diagnosed with psychiatric disorders than their male counterparts (43). Additionally, a study of sick-call diagnoses aboard U.S. Navy ships found higher rates of personality disorder, stress, adjustment reactions, and eating and sleep disorders among women than men (44). Whether these differences are because women may find military life more difficult or women's greater propensity than men to use health services is unclear. Findings among military women are not unique, however. Civilian studies have demonstrated that women report more negative affect and distress than men in response to similar lifetime events (45).

Studies of civilian women have demonstrated that mothers with low levels of career salience and high investment in the maternal role report greater maternal separation anxiety (40). This pattern may be exaggerated in military women who experience periodic separations. That is, women who identify with the military and report higher career salience coupled with lower levels of maternal role investment should be expected to report lower levels of maternal separation anxiety and better psychological adjustment (less stress, less depressive symptoms, less anxiety). Additionally, career salience is expected to be higher for the deployment than the non-deploying control group.

Another factor related to maternal separation anxiety and psychological well-being of military women may be social support. Social support reflects the mother's perception of her access to individuals that can be counted on to provide emotional or practical assistance when needed (46). Previous research on civilian women has shown that supportive relationships have a positive effect on maternal affect (47). Because the availability of social support is critical for women balancing a military career and motherhood, and particularly for military mothers experiencing separation, it is believed that women who feel supported will report lower maternal separation anxiety and greater psychological well-being (i.e., less stress, less anxiety, less depressive behaviors) than women who report less social support. Married women are expected to report lower stress than single women, and stress is anticipated to be highest at the predeployment period.

Other factors that may affect maternal separation anxiety are the satisfaction and quality of child care and experiences of children during deployment. In civilian women, satisfaction with child care has been shown to decrease maternal separation anxiety (48). Additionally, satisfaction with care, regardless of the particular type of arrangement, appears to be critical for other aspects of mothers' personal and work life (49). Dissatisfaction with child care is related to mothers' reported level of stress and stress-related symptoms (50), maternal separation anxiety (51), job satisfaction (52), and may be related to other aspects of psychological well-being and relationships with both child and spouse.

Relations between career salience, maternal role investment, quality of child care, and the care experiences of the child during deployment and maternal separation anxiety are likely to be exasperated in Navy mothers experiencing long-term separation. It is hypothesized that high career salience, low maternal role investment, supportive relationships, and satisfaction with child care and child care experiences may reduce anxiety about separation and enable military mothers to better balance the demands of a military career and motherhood. Moreover, in all likelihood these factors will influence plans for reenlistment and may be critical to the maintenance of military readiness.

In order to address these relationships, information is being obtained on the importance of career, maternal role investment, social support, satisfaction with child care, and child care experiences during the separation. These factors are surveyed prior to and after separation for military women experiencing deployment and at similar intervals for the non-deploying control group.

Relations between Temperament, Child Behavior and Maternal Separation Anxiety and Attachment

Child temperament also may impact Navy mothers' concerns about extended separation. Maternal separation anxiety is higher in civilian women with children judged as temperamentally difficult (46). Specifically, these women have greater concerns about their caregivers' ability to cope with their children.

Additionally, some researchers believe that variation in the security of attachment is a product of temperament differences among babies (53,54,55,56,57); however, others believe that variation in temperament is not a major determinant of attachment classification (24). Similarly, some suggest that temperament is associated with or predictive of child behavior (58), whereas others have not found these relationships (59). Relationships between child temperament, behavior, maternal separation anxiety, and attachment are being assessed prior to and after deployment. It is hypothesized that mothers whose children are temperamentally difficult may have higher separation anxiety, and that these children may have more difficulty during the separation than children judged as less difficult.

Child Behavior and Temperament and Deployment

Research on civilian children has shown that temperament is fairly stable over time (60). However, long-term separation from the primary caregiver may result in temporary or prolonged disturbances in child temperament. With respect to child behavior, previous research on military children has found that child behavior is associated with phase of separation in traditional father-deployed families (4,5). That is, similar to research on Navy wives, a cyclic pattern of behavior has been demonstrated in Navy children, with higher levels of depressive mood and externalizing behavior reported prior to and during the deployment than at postdeployment (4,5). Changes in children's behavior are anticipated as the result of maternal separation. Specifically, children are expected to exhibit the highest levels of internalizing and externalizing behavior and difficult temperament prior to and during deployment than at postdeployment.

Relations between Retention and Deployment

Traditionally women have placed their jobs and careers second to their husbands. Duntzman and colleagues (61) found that marital status was negatively correlated with intentions to reenlist in Army women. Others (62) have found that female members of dual career military couples are more likely than males to leave the service. In an interview study of military-induced separation in Navy women with children, Kelley and colleagues found deployment to be a factor in women's decision to reenlist (63). Thus, a final purpose of the present study is to examine the relationship between the various factors examined and women's intentions to reenlist. Many of the variables examined in the present study are expected to influence reenlistment decisions in a similar fashion. That is, higher levels of separation anxiety, higher maternal role investment, poorer psychological adjustment (higher stress, anxiety, and depressive symptoms), less social support, and less satisfaction with child care should negatively impact reenlistment. At the same time, higher levels of career salience may positively impact reenlistment decisions. For Navy women experiencing deployment, families who experience few negative outcomes as a result of the mother's absence, should positively impact the Navy women's decision to reenlist. In

contrast, for Navy women assigned to shore duty, anticipated ship rotation may negatively impact reenlistment plans.

2.0 EXPERIMENTAL METHODS

2.1 Sample.

One hundred and twenty-two Navy mothers, their children, the child's primary caregiver in the mother's absence (deployment condition only), and the child's child care provider have participated (are participating) in the study. Although the original proposal specified that 120 women be recruited to participate, due to attrition, a decision was made to recruit 150 participants. This allows for an attrition rate of 20% and a final sample of 120 women.

All participants have children between the ages of 1 and 6 years. Approximately one-half of the subjects are married (currently 52% of the sample (n=122) is married).

All participants in the deployment condition are assigned to one of several ships in the Hampton Roads area. As of July 1997, 40 women experiencing deployment have participated (or are currently participating) in the study. In addition, the Executive Officers or Senior Medical Officers of 5 ships (1 carrier, 4 support ships) stationed in the Norfolk area with mixed gender crews have been contacted by the PI. All 5 ships are scheduled to experience a routine, six-month separation during the fall 1997 or winter of 1998 and have agreed to participate. Approximately 35 additional women will be recruited from the aforementioned ships.

Although recruitment of women meeting the study criteria aboard ships that experienced deployment during 1997 has been high (above 90%), many of these ships have few female crewmembers at this time. Thus, data collection has been extended by approximately six months and will be completed by the summer of 1998.

As of July 1997, 82 women meeting the criteria for control subjects have participated in the study. Control participants are Navy mothers assigned to shore duty in the Hampton Roads area. Control subjects must experience only routine workday absences from the target child. All control subjects have completed at least the initial phase of the project; the majority of control subjects have completed all three phases of the project.

All children meet the following criteria: no significant physical, sensory, cognitive or behavioral/psychological impairment. All participants are Navy mothers, with enlisted rank, whose children normally reside with them. Participants represent the ethnic variability of the Navy population. At the present time, 61% of the sample is Caucasian, 28% is African-American, 5% is Hispanic, 2% is Pacific Islander, and 5% is of racial/ethnic composition other than one of these categories.

Recruitment

A battlegroup deploys from the Naval Base at Norfolk approximately every three to four months. A battlegroup typically involves the deployment of a carrier (approximately 5,000 crew members) and several supporting ships (from 200-300 to 1,500 crew members each). The PI has worked closely with the Atlantic Fleet Command to identify ships with mixed gender crews that are experiencing routine deployments. At the present time, women from one battlegroup (1

carrier; 2 destroyers) have been followed through an entire deployment; women from 2 additional ships (1 oiler; 1 carrier) are currently being studied. The remaining deployment participants will be recruited from the ships (1 carrier, 4 support ships) mentioned above.

To ensure that all mothers who meet the study criteria assigned to the deploying battlegroups were informed of the study, the PI (or commander who served the point of contact at the Atlantic Fleet Command) contacted the Executive Officer or Senior Medical Officer on each of the targeted ships. Next, a list of female personnel with children was generated by administrative office crewmembers assigned to each of the ships. All women who met the study criteria were requested to attend a brief meeting in which the study was described. The general purpose of the study was explained (i.e., to examine the effects of ship assignment on female personnel and their families). A description of the requirements of the study took place (i.e., Participants were interviewed, completed questionnaires, and took place in a mock mother-child separation before and after the upcoming deployment. The child's primary caregiver during the separation was asked to complete two questionnaires and a phone interview during the separation. The child's child care provider was asked to complete two questionnaires assessing the child's behavior and temperament before, during, and after the deployment). Next, questions regarding the study were answered. Individuals who wished to participate were asked to sign up. Individuals who expressed interest in the study were phoned by a graduate research assistant. Any additional questions regarding the study were answered and a convenient time for the predeployment interview was set. During the phone call, the research assistant verified that the crewmember was scheduled to deploy and has primary custody of child within the specified age range.

As the primary method of identifying control subjects, the PI or commander who served as a point of contact at the Atlantic Fleet command, identified four commands in the Hampton Roads area with mixed gender crews. Similar to the procedure followed with the deployment condition, the PI or commander contacted the Commanding Officer or Executive Officer at each of the commands. A list of female personnel with children was generated by administrative office crewmembers assigned to each of the commands. All women who met the study criteria were requested to attend a brief meeting in which the study was described (i.e., Participants will be interviewed, complete questionnaires, and take place in a mock mother-child separation twice approximately seven months apart. At the mid-point [approximately 3 1/2 months], the participants will be asked to complete two questionnaires about the child's behavior and disposition and a brief phone interview. The child's child care provider will be asked to complete two questionnaires assessing the child's behavior and temperament at the same three intervals as the mother's participation.). At this point, questions regarding the study were answered. Individuals who wished to participate were asked to sign up. Individuals who signed up were phoned by a graduate research assistant. Any additional questions regarding the study were answered and a convenient time for the initial interview was set. During the phone call, the research assistant verified that the participant's EAOS was not up during study interval and that other than workday absences, the participant did anticipate extended separation from the target child. This procedure was followed with the exception of one command. Due to the size of the command, an e-mail message describing the study was sent to all employees. Women who met the study criteria were asked to phone the PI directly. At this point, a description of the study

took place. Women who met the study criteria and wished to participate then were contacted by a graduate research assistant and a convenient time to meet was scheduled.

As an additional method of identifying control participants, parents with children attending a daycare that served military parents received a letter describing the study. Women who wished to participate either returned a preaddressed, prestamped letter to the PI or phoned the PI directly. As a last method of recruiting non-deploying control participants, advertisements were placed in local Navy newspapers. Individuals responding to the advertisement called the PI directly. The PI explained the study in detail. Participants who met the study criteria were invited to participate.

Fifty-one women were recruited from one of the four commands identified; 18 women were recruited from advertisements in local military newspapers; and 13 women had children attending the daycare center.

A series of t-tests and chi-square analyses were conducted to ensure that the deployment control and the control group did not differ from one another on child age, gender, and that Navy mothers did not differ on level of education, race, or military rank. The groups do not differ from one another on child age, gender, race, level of education or military rank ($p > .05$). Additional comparisons will be conducted after information is available on all of the deployment subjects. At this point, the study participants appear to resemble the demographics of the population of Navy women in terms of age ($M = 27.1$ years; $SD = 5.1$ years; Range = 20 to 47 years), race (61.5% white, 38.5% minority), marital status (52.0% married), and education (37.5% held a GED or high school degree, 54.8% had taken some college courses, and 7.8% held bachelor's degrees). Additional comparisons to the larger population of Navy women will take place once demographics are available on all participants.

Mothers were paid \$25 at predeployment and postdeployment and at similar intervals for control subjects.

2.2 Measures.

The degree to which separation affects Navy mothers and their children was examined through a combination of semi-structured interviews, the Attachment Behavior Q-Set Scale (31), standardized questionnaires, behavioral observation (a modified version of the SSBI for use in the home), primary caregiver ratings of children's behavior and temperament during the separation, brief phone interviews assessing children's behavior and experiences during the separation, and daycare teacher or home-care providers' assessments of the child's behavior and temperament at preseparation, midseparation, and postseparation (and at similar intervals for the control subjects). Mothers completed all measures *twice*, once prior to separation at the predeployment interview and once after the separation was complete at the postdeployment interview and at similar intervals for control subjects.

Selection of Measures

Questionnaires were chosen that were well-established and had published, reliable, psychometric properties and that were appropriate for active-duty military women with young

children. Copyright permission was obtained to reprint the Child Behavior Checklist (see Appendix P); the remaining questionnaires were public domain.

Development of the Semi-structured Interviews

A draft of the semi-structured interview was sent to several active-duty military and non-military investigators to review the quality and importance of the content. The questionnaire was modified based on the suggestions.

Semi-structured Interview (Predeployment)

To assess the degree to which parents perceive their families to be affected by daily or long-term separation and the effects that separation may have on intentions to reenlist, participants were asked a number of questions (see Appendices A - F). The predeployment questionnaire assessed questions regarding the target child's usual child care arrangements, the continuity and length of time with the current childcare provider, maternal guilt regarding daily separations, ease of child care arrangements, time missed from work due to child care arrangements, and comments regarding child care. The next set of questions asked about child care arrangements during the approaching deployment, how comfortable the mother was with child care arrangements during the upcoming deployment, guilt regarding leaving the child during the anticipated deployment, ease of securing child care during the upcoming deployment, and the anticipated impact of the deployment on her immediate family. The next set of questions asked at what point she expected to be assigned to sea duty, the amount, length, and timing of separations from the target child due to work, and any difficulties due TDY. The next set of questions assessed any health problems identified by the child's doctor, or recent changes in the child's health, behavior or disposition, as noticed by the target child's child care provider or the mother during the past month. Next, mothers were asked a series of questions that ascertained the importance of mothering. These six questions comprised the Maternal Role Investment Scale (18,33) and were administered to determine the importance participants placed on the maternal role (see questions 8A-8F, Appendix A). Next mothers were asked six questions that ascertained the degree of perceived emotional and practical social support the mother received from the child's father, her family, and her friends. Unmarried women were asked about the frequency and relationship of the child's biological father with the target child. Finally, subjects were asked whether they intended to reenlist at EAOS and reasons for reenlistment. The predeployment interview for the deployment subjects is presented in Appendix A.

The initial interview for control subjects was identical to that for deployment subjects except that mothers were not asked the series of questions related to the upcoming deployment (e.g., who will care for the child during deployment, and so forth). The initial interview for the control subjects is presented in Appendix B.

In addition to the initial interview, both deployment and control subjects were asked about their beliefs regarding shipboard pregnancy. Because shipboard pregnancy is a controversial subject, a decision was made to survey women regarding their knowledge and beliefs regarding this issue. See Appendix C.

Semi-structured Interview (Mid-deployment)

At the mid-deployment assessment when the deployment group was at sea, the child's primary caregiver during the mother's absence served as the respondent (for control subjects, the child's mother served as the respondent). Most often the primary caregiver in the mother's absence was the child's father or maternal grandmother. The father/grandmother was asked a number of questions including the following: the nature of his or her relationship with the child (i.e., grandmother, father, aunt), the length of time he or she had been the child's primary caregiver, how much experience he or she has caring for young children and how comfortable he or she is caring for young children. In addition, the father/grandmother was asked how the child responded when the mother initially left and how the child has responded to the mother's absence in the last month. All midpoint respondents (father/grandmother and the mother for the control subjects) were asked about any health problems the child has, any sudden changes in the child's health, and any changes in the child's disposition or behavior. The mid-deployment interview for the deployment group is presented in Appendix D. The midpoint interview for the control subjects is presented in Appendix E.

Semi-structured Interview (Postdeployment)

To assess the degree to which parents perceived that their families were affected by daily or long-term separation and the effects that separation has on intentions to reenlist, participants were asked a number of questions. The postdeployment interview for deployment subjects is presented in Appendix F. The postdeployment interview for control subjects is presented in Appendix G. The postdeployment interview assessed the target child's usual child care arrangements, whether the child care provider is licensed, the cost of child care arrangements, the number of hours that the Navy mother works per week, travel time to the child care provider, whether her babysitter changed while she was on deployment, the number of different child care providers she had while on deployment, continuity and length of time with the current child care provider, maternal guilt regarding daily separations, ease of child care arrangements, how much time she has missed from work due to child care arrangements in the last year, and comments regarding child care. The next set of questions asked about the nature of the primary caregiver during the deployment, how comfortable the mother was with the primary caregiver during the deployment, guilt regarding leaving the child during the upcoming deployment, and whether the child's primary caregiver changed during the deployment. Mothers whose primary caregiver changed during deployment, were asked what strategies were employed to make new primary caregiver arrangements while she was at sea. Participants also were asked about the ease of securing child care during the deployment; the impact of deployment on the mother's immediate family; the best and worse aspects of deployment; the total length of time she has been away from the target child in the last year due to work separations/deployment; changes in the child's health while she was on deployment; sudden changes in the child's health since returning from deployment; whether the child care provider has mentioned any changes in the target child's health; behavior or disposition during the deployment or since she returned from deployment; whether she has noticed any changes in the child's health, behavior, or disposition since she returned from deployment; how the child has responded to the mother since she got back from deployment; any changes in the mother-child relationship since the mother returned from

deployment; whether any event occurred that may have negatively impacted the child during the deployment; and how the mother handled this negative event. Next, Navy mothers were administered the Maternal Role Investment Scale. This was followed by six questions that assessed the mother's perceptions of social support, the child's relationship with the father (single women only), whether the mother believed the deployment was beneficial in terms of her Navy job, whether she gained new skills or knowledge as a result of the deployment, whether she feels more integrated into the Navy, and whether her plans in regards to staying in/leaving the Navy have changed, how likely she will be to reenlist at her EAOS, her overall Navy experience up to this point, and whether she believes that the Navy policy regarding women at sea should be changed.

The final interview for control subjects was identical to the final interview for deployment subjects except that mothers were not asked any questions directly related to the deployment.

Parent Questionnaires

Attachment Behavior Q-Set Scale (31). The Attachment Behavior Q-Set Scale (Revision 3.0, 1987) consists of 90 statements such as "Child will accept and enjoy loud sounds or being bounced around in play, if mother smiles and shows that it is supposed to be fun." At both the pre- and post-interview, mothers sorted the 90 statements into nine piles of ten statements each, from the most characteristic to least characteristic of the child. Each statement was assigned a score from 1 to 9 (i.e., most characteristic = 9; least characteristic = 1). These scores were correlated with the Q-Set definition of security provided by the Waters and Deane study (45). That is, to assign a security score, the 90 scores were correlated for each child with the 90 scores given by the attachment experts as being representative of the "most secure child." The 90 statements are presented in Appendix H.

Maternal Separation Anxiety Scale

The MSAS (33) is a 35-item, 3-factor scale, self-report inventory. Each item is rated on a 5-point Likert-type scale ranging from: 5) strongly agree to 1) strongly disagree. The scale measures the following three dimensions: (1) Maternal Separation Anxiety (e.g., "Only a mother naturally knows how to comfort a distressed child."); (2) Perception of Separation Effects (e.g., "My child will benefit from group experience since they will provide him/her with social experiences that he/she could not get at home."); and (3) Employment Related Concerns (e.g., "I would resent my job if it meant I had to be away from my child."). The Maternal Separation Anxiety Scale is presented in Appendix I.

Perceived Stress Scale

The PSS (64) is a psychometrically sound, 14-item questionnaire that measures the degree to which respondents feel their lives to be unpredictable, uncontrollable and overwhelming (see Appendix J).

Career Salience Questionnaire

The CSQ is a 27-item Likert format questionnaire that measures the degree to which a person places importance on a career for personal fulfillment in the following three areas: general

attitude about work, the relative importance of work, and the degree of relevant vocational thought and planning (65). The 28th item is a ranking of life priorities--e.g., family, career, religion community, and so forth. High scores (range = 27 to 140) reflect high career salience. Greenhaus reported alphas of .81 for male and female subjects. Previous longitudinal studies (49) have confirmed the stability of career salience scores over a 3 1/2 year period ($r = .80$, $p = .0001$). The Career Salience Questionnaire is presented in Appendix K.

Maternal Role Investment Scale

The MRIS (18, 40) was administered to measure a woman's commitment to motherhood as her primary responsibility and the priority in her self-concept that motherhood assumes. Mothers received a score from 1 (low investment in the maternal role) to 9 (extremely high investment) on the basis of the mother's responses to four interview questions concerning the meaning and importance of motherhood for her (e.g., "How complete would your life be if you weren't a mother?"). As described above, because the majority of items are open-ended, a decision was made to administer the MRIS during the face-to-face interview. The MRIS is presented in Appendix L and within the body of the larger maternal interviews (see Appendices A and B and F and G).

Two self-report instruments have been added to the protocol. These two questionnaires allow for better assessment of the psychological impact of experiencing long-term separation from family members. Specifically, these two questionnaires address maternal depressive behaviors and maternal anxiety.

Center for Epidemiologic Studies-Depression Scale (CES-D)

The CES-D (66--Radloff, 1977) is a 20-item self-report instrument that assesses current depressive symptomology. The CES-D was chosen over other measures because it includes items less reflective of severe levels of depression, therefore allowing assessment of mild to moderate levels of depression. Possible scores range from 0 to 60; a score of 16 indicates clinical levels of depression. The CES-D appears to be a good measure of depression in nonclinical samples and has been successfully used in studies of mothers of young children (67-- Hock, Schirtzinger, & Lutz, 1992). The CES-D is presented in Appendix M.

Self Analysis Form (Anxiety Questionnaire)

Respondents completed the Self Analysis Form (68) that assesses current feelings of anxiety. Possible scores range from 0 to 60. The Self Analysis Form is presented in Appendix N.

Deletion of Parenting Dimensions Inventory and Parenting Stress Index

Although the original proposal proposed using the Parenting Dimensions Inventory (69) and the Parenting Stress Index (70), these two questionnaires were deleted from the protocol. The rationale for dropping the Parenting Dimensions Inventory was that it was designed for parents of three- to six-year-olds. Active duty women in the present study had children between the ages of 1 and 6 years of age. Although modifying the scale for use with mothers of younger children was considered, unfortunately, this was not possible. The Parenting Stress Index was dropped from the protocol for two reasons. The Parenting Stress Index has been used with active

duty Navy women previously in a similar design (6). Additionally, the length of the Parenting Stress Index (118 items) made its administration prohibitive.

Mother/Child Behavioral Observational Measures

Strange Situation Behavior Instrument. A modification of the Strange Situation Behavior Instrument (71), was used to assess mother-infant attachment behavior in the home situation. The modified instrument consists of the last six episodes of Ainsworth's instrument and is comparable as much as possible to the original instrument (72). The child's behavior during the observation period was recorded and coded according to Ainsworth's standardized coding procedures (73) to yield a quantifiable statement about the child's interaction with his mother and with a stranger in terms of the following behavioral categories reflecting attachment behavior: contact-maintaining, proximity-seeking, contact-resisting, proximity-avoiding, and search behaviors.

Child Measures

Colorado Childhood Temperament Inventory (CCTI). To examine mothers' perceptions of their children's temperament, participants completed the CCTI (74) before and after the deployment (and at similar times for the control subjects). The CCTI is a combination of the NYLS and EASI systems, is appropriate for ages 1-6 years, and measures sociability, emotionality, activity, attention span-persistence, reaction to food, and soothability. The CCTI is presented in Appendix O.

Child Behavior Checklist for AGES 2/3 (CBCL/2-3). To examine maternal perceptions of children's behavioral adjustment, Navy mothers completed the CBCL/2-3 (75) before and after the scheduled deployment (and at similar times for the control subjects). The CBCL/2-3 is a 99-item questionnaire that measures six dimensions of preschool behavior: Social Withdrawal, Depressed, Sleep Problems, Somatic Problems, Aggressive, and Destructive. Fifty-seven items were taken from the CBCL/4-16 (76). Additional items were taken from previous studies of problem behavior in this age group (77). Second-order factor analyses demonstrated that the first two dimensions measure internalizing behavior; the second two measure externalizing behavior. Mean test-retest reliability was $r = .87$, 1-year stability $r = .69$, 1-year predictive r with CBCL/4-16 scales at age 4 was $.63$, 2-year predictive r was $.55$, and 3-year predictive r was $.49$ (Achenbach et al., 1987). T scores, which have been corrected for child age and gender, will be used for statistical purposes. See Appendix P.

Child Behavior Checklist for AGES 4/18 (CBCL 4/18). When the target child was between the ages of 4 and 6, Navy mothers and primary caregivers (deployment subjects only) completed the Child Behavior Checklist for ages 4 to 18 (76). Second-order factor analyses has demonstrated two higher order factors: internalizing and externalizing behavior. T -scores, reflecting internalizing and externalizing behavior that have been corrected for child age and gender will be used in all statistical analyses. See Appendix Q.

Child Care Provider Measures

Colorado Childhood Temperament Inventory (CCTI). Daycare teachers/home-care providers completed the CCTI (74) 1 month before a scheduled separation, 12-14 weeks after the initial separation, and 1 month after the parent's return. Teachers/home-care providers for the control group completed the CCTI at similar intervals. The CCTI is presented in Appendix O.

Child Behavior Checklist 2/3. To assess teachers/home-care providers' perceptions of children's behavior, the child's daycare teacher or home-care provider completed the CBCL 2/3 (75). The Child Behavior Checklist consists of 3-point ratings from "not at all true of child" to "very true of child" of numerous social and non-social problem behaviors. Questionnaires were completed 1 month before a scheduled separation, 12-14 weeks after the initial separation, and 1 month after the parent's return. Teachers/home-care providers of control children completed the CBCL 2/3 at similar intervals (e.g., October, February, and June). T scores for the broad band scale for Internalizing and Externalizing will be used in all statistical analyses. See Appendix P.

Child Behavior Checklist for AGES 4/18 (CBCL 4/18). When the target child was between the ages of 4 and 6, child care providers completed the Child Behavior Checklist for ages 4 to 18 (76). Second-order factor analyses has demonstrated two higher order factors: internalizing and externalizing behavior. T-scores, reflecting internalizing and externalizing behavior that have been corrected for child age and gender will be used in all statistical analyses. See Appendix Q.

The background questionnaire for the final interview is presented in Appendix R.

2.3 Interview Coding.

The PI and research assistants developed a coding schedule that captured participants' responses to the predeployment, mid-deployment, and postdeployment semi-structured interviews (see Appendices S thru Y). All interviews are being coded by a research assistant blind to the specific hypotheses of the study. All open-ended questions are being coded by a second assistant also blind to the hypotheses of the study. Prior to actual coding, assistants were trained to criteria (80% agreement or above on each of the individual open-ended questions).

Similar to the procedure for the semi-structured interview, the Maternal Role Investment Scale is being coded by a research assistant blind to the purposes of the study. One-quarter of the MRIS's are being coded by a second coder also blind to the hypotheses of the study. Prior to the coding of actual subjects' responses, coders were trained to criteria (90% agreement).

2.4 Procedure.

Study Approvals. The protocol and consent forms were developed and approved by the U.S. Army Medical Research and Materiel Command. The protocol and consent forms also were approved by the PI's university committee on human subjects. Next the PI obtained a Letter of Introduction from the Atlantic Fleet Command. The approval letters were mailed to the

Commanding Officer, Executive Officer, or Senior Medical Officer of each command or ship. Following this the individual ships or commands were contacted by the PI or the commander serving as a point of contact from the Atlantic Fleet Command. The PI or commander explained the purpose of the study. The PI (and in many cases the commander serving as the point of contact for the Atlantic Fleet Command) met with the Commanding Officer, Executive Officer, and/or Senior Medical Officer. The study was described in detail and the Commanding Officer gave permission to recruit crewmembers fitting the study criteria. The PI explained the study to the crewmembers (either in a group or individually as described above). Prior to actual participation, the research assistants explained the study, and written consent was obtained both for the mother and her child to participate. The graduate research assistant signed as a witness. Participants were asked to call the PI if questions arose at any point in the study.

Pilot Testing. The graduate research assistants received approximately two months of training prior to conducting the interviews. The training consisted of general training in interviewing and questionnaire administration, review of the principles of the ethical treatment of human subjects as outlined by the American Psychological Association. In addition, the research assistants conducted pilot interviews with mothers and children in the laboratory and in the home. These interviews were critiqued by the PI. Additionally, the research assistants received information and training regarding the Strange Situation Behavior Instrument coding (SSBI). The training involved reviewing literature on the SSBI, reviewing and scoring videotapes of children in the strange situation, mastering the SSBI coding until all assistants obtained approximately 90% agreement, conducting and scoring the SSBI with pilot subjects in the laboratory and home, and receiving three days of instruction from Dr. Ellen Hock regarding SSBI procedure and scoring. Students also received instruction in scoring children's responses to the examiner upon initial contact with the child from the PI and Dr. Hock. Periodic retraining has been provided to achieve consistency over the entire survey period.

Data Collection. Data collection for the separation group took place on two occasions: predeployment (approximately 3-4 weeks before the deployment) and postdeployment (approximately 3-4 weeks after the deployment ends). For the control mothers, data collection phases took place at three points approximately 3 1/2 months apart (initial, midpoint, and final). Because the deployment group was at sea, at midpoint during the deployment, the child's primary caregiver was interviewed by phone and completed two questionnaires. Participants were individually interviewed in their homes by the female graduate research assistants in psychology.

With the exception of 4 participants, all subjects were interviewed in their homes. The specific recruitment procedure for participants is outlined above. In order to recruit the child's child care provider, a letter was sent explaining the general purpose of the study and requesting her or him to complete the Child Behavior Checklist 2/3 (CBCL 4/18 for children above age 3) and the Colorado Childhood Temperament Inventory at three points: 3 to 4 weeks prior to deployment, at mid-deployment in the deployment (approximately 12 to 14 weeks after the mother got underway), and 3 to 4 weeks after the mother's return from deployment. Child care providers of the control children also completed the CBCL 2/3 (or CBCL 4/18) and the CCTI at similar intervals and returned the questionnaires within two weeks in a preaddressed, prestamped

envelope. Child care providers who did not return the completed CBCL 2/3 or CBCL 4/18 and CCTI within two weeks, received a reminder phone call from a member of the research team. During mid-deployment (and at similar intervals for the non-deploying control subjects), the child's primary caregiver (for non-separation subjects, this was the mother) was administered a brief phone interview (see above) and completed the CBCL 2/3 (or CBCL 4-18) and the CCTI.

3.0 Results

3.1 Data Analysis.

Because data are currently being collected, a decision was made not to conduct any preliminary analyses. Some additional analyses, however, have been planned and are outlined below.

In addition to the originally proposed analyses which were designed to examine specific hypotheses, a decision was made to examine relationships among the variables using a structural modeling approach. Specifically, LISREL 8 (78) will be utilized to evaluate the plausibility of various causal models. LISREL is a computer program that solves for structural equations and estimates the parameters of a model using maximum likelihood procedures. After estimating the parameters of the model, the researcher is able to assess the plausibility of the model (i.e., how well the proposed model accounts for the variation and covariation in the dataset). The better the model is able to reproduce (fit) the dataset, the more plausible the model is as an explanation of the data. Additionally, the model can be revised or competing models may be tested in the case of an inadequate model fit.

The models to be developed and tested will examine relationships among maternal constructs (i.e., length of time away from child, attachment, quality of child care, and so forth) and children's outcomes (i.e., children's behavior, health, temperament). A model will be developed to examine relationships between child outcomes and intentions to reenlist. Additionally, a causal model will be developed and tested that examines the degree to which maternal constructs (e.g., years of military service, career salience, maternal role investment, and so forth) account for reenlistment plans. Dr. Keith Widaman, professor of psychology at the University of Riverside and an expert in structural modeling, has agreed to serve as a consultant regarding the proposed data analyses.

Data Preparation and Preliminary Analyses. In addition to the planned structural modeling analyses, several specific Multivariate Analyses of Variance/Analyses of Variance will be examined as outlined in the original proposal.

The non-deploying control has been monitored carefully to ensure that they are similar with respect to demographics to the larger group of Navy women and women assigned to sea duty. If any differences are noted between the final groups, however, the analyses will be conducted using an analysis of covariance technique in which the variable will be partialled out before applying the MANOVA/ANOVA technique. As described above, based on an n of 122, no demographic differences exist between the shore and sea duty groups. Moreover, every attempt has been made to recruit a representative sample of Navy women with children.

The length of time that participants have had their child with the current child care provider has varied. Child care providers are being asked how long they have been the child's caregiver. Correlational analyses will be conducted to determine if length of time that the teacher/home-care provider has dealt with the child is related to observations of child behavior and temperament. If length of time is correlated with child outcome measures, the analyses will be conducted using an analysis of covariance technique in which length of time will be partialled out before applying the MANOVA/ANOVA technique.

For separation subjects, variability may exist in the length of time that the primary caregiver (during the mother's absence) has cared for the child and the degree of relationship that he or she has with the child (primary caregivers during the mother's absence may be fathers, grandmothers, babysitters). Primary caregivers are being asked how long they have cared for the child and to describe the caregiver-child relationship. Analyses will be conducted to determine if length of time and quality/type of relationship is related to observations of child behavior and temperament. If these variables appear related to child outcomes, the analyses will be conducted controlling for length of time he or she has cared for the child or the nature of the caregiver-child relationship.

Separation Effects-Between Groups Differences. Although child gender was originally proposed as a variable of interest, due to concerns regarding cell size, child gender will not be examined statistically.

To examine time-related fluctuations in maternal separation anxiety, a 2 (condition-separation/no separation) X 2 (phase of separation-pre/postdeployment) X 2 (marital status) multivariate analyses of variance treating phase of separation as a repeated measure will be conducted on the three MSAS scales.

To examine time-related fluctuations in child behavior, temperament, perceived attachment security, and attachment behaviors, four 2 (condition-separation/no separation) X 2 (phase of separation-pre/postdeployment) X 2 (marital status) multivariate analyses of variance with phase of separation treated as a repeated measure will be conducted on CBCL internalizing and externalizing T-scores, CCTI scores, Q-sort attachment scores, and attachment behaviors on the modified SSBI. In addition, two 2 (condition-separation-separation/no/separation) X 3 (phase of separation-pre/mid/postdeployment) X 2 (marital status) multivariate analyses of variance will be conducted on the daycare teachers/home-care providers' CBCL and CCTI scores. Phase of separation will be treated as a repeated measure.

To determine whether children's behavior and temperament differ as a function of mother-child attachment, four 3 (attachment security-secure, avoidant, anxious-resistant) X 2 (condition-separation/no separation) X 2 (marital status) X 2 (phase of separation-pre/postseparation) multivariate analyses of variance treating phase of separation as a repeated measure will be conducted. The first two MANOVAs will examine the internalizing and externalizing CBCL t scores as reported by the parents. Attachment security will be measured in two ways: from results of the Attachment Behavior Q-Sort (30) and the modified SSBI (70)--accounting for the two MANOVAs. A decision was made to employ both perceived attachment and attachment behavior because research has suggested that they may provide unique insight into the attachment relationship and may not be so highly correlated as to be used as substitutes for one another (79). The second two MANOVAs will examine the internalizing and externalizing CBCL t scores as

reported by the child's daycare teacher or home-care provider. Again, attachment security will be measured in two ways: from results of the Attachment Behavior Q-Sort and the modified SSBI--accounting for the two MANOVAs. To examine whether children's temperament differs as a function of mother-child attachment, four 3 (attachment security-secure, avoidant, anxious-resistant) X 2 (condition) X 2 (marital status) X 2 (phase of separation) multivariate analyses of variance treating phase of separation as a repeated measure will be conducted. The first two MANOVAs will examine mothers' temperament ratings; the second will examine daycare teacher/home-care provider's ratings. For the MANOVAs examining children's daycare teachers or home-care providers' reports of children's behavior and temperament, the phase of separation variable will be modified to reflect the three levels of this variable (pre/mid/and postseparation).

To examine the relation between perceived attachment security and attachment behaviors and maternal separation anxiety, two 3 (attachment security-secure, avoidant, anxious-resistant) X 2 (condition-separation/no separation) X 2 (marital status) X 2 (phase of separation-pre/post separation), multivariate analyses of variance with phase of separation as a repeated measure, will be performed on the three MSAS dimensions. Attachment security will be assessed in two ways: from results of the Attachment Behavior Q-Sort and the modified SSBI--resulting in two MANOVAs.

A 2 (career salience--high/low) X 2 (condition-separation/no separation) X 2 (phase of separation--pre/postdeployment) ANOVA will be employed to determine whether separation anxiety differs as a function of the importance of mothers' place on a career, condition, and phase of separation.

A 2 (career salience--high/low) X 2 (maternal role investment--high/low) ANOVA will be employed to determine whether maternal separation anxiety differs as a function of career salience and commitment to the maternal role.

To examine whether satisfaction with child care during the separation, quality of child care, and child care experiences during separation will be related to maternal separation anxiety, three one-way MANOVAs will be conducted. The independent variables will be the degree of satisfaction (satisfied/not satisfied), quality of child care (high quality/low quality), and child experiences (positive/negative) reported by mothers. These variables will be assessed through mothers' postseparation interviews and the primary caregivers' interviews during the separation.

A 2 (condition) X 2 (deployment phase) X 2 (marital status) ANOVA will be conducted to determine whether maternal stress differs as a function of condition, deployment phase, and marital status.

4.0 Conclusions.

The objective of this research is to investigate the effects of intermittent, military-induced separation on women and their children and to identify factors that may mediate the effects of separation. The first phase of this project has focused on: 1) the development of semi-structured interviews and identification of psychological measures designed to understand the effects of deployment on military women; 2) developing standards for conducting the research and training research assistants; 3) identifying and recruiting the study sample; 4) data collection; 5) development of a coding schedule; and 6) further specification of the data analyses.

The objectives of the next phase of the project are to: 1) complete data collection; 2) complete data analysis; 3) develop knowledge of the effects of deployment on women and their children; 4) identify areas in which the effects of separation on women differ from findings on military men; 5) identify areas in which the effects of deployment are similar to men; 6) identify factors that may mediate the effects of separation; 7) examine relations between the effects of deployment and intentions to reenlist; 8) make recommendations that may improve the quality of deployment programs and other services for women and their families; and 9) begin the dissemination of study findings.

III F. Bibliography

1. Institute of Medicine: Recommendations for Research on the Health of Military Women, Washington, D.C., National Academy Press. 1995.
2. Beckman, K., Marsella, A. J., & Finney, R. (1979). Depression in the wives of nuclear submarine personnel. American Journal of Psychiatry, 136, 524-526.
3. Glisson, C. A., Melton, S. C., & Roggow, L. (1980). The effect of separation on marital satisfaction, depression, and self-esteem. Journal of Social Service Research, 4, 61-76.
4. Kelley, M. L. (1994). The effects of military-induced separation on family factors and child behavior. American Journal of Orthopsychiatry, 64, 103-111.
5. Kelley, M. L. (1994). Military-induced separation in relation to maternal adjustment and children's behavior. Military Psychology, 6, 163-178.
6. Kelley, M. L., Herzog-Simmer, P. A. & Harris, M. A. (1994). Effects of military-induced separation on the parenting stress and family functioning of deploying mothers. Military Psychology, 6, 125-138.
7. Nice, D. S. (1983). The course of depressive affect in Navy wives during family separation. Military Medicine, 148, 341-343.
8. Amen, D. J., Jellen, L., Merves, E., & Lee, R. E. (1988). Minimizing the impact of deployment on military children: Stages, current preventive efforts, and system recommendations. Military Medicine, 153, 441-446.
9. Jensen, P. S., Lewis, R. L., & Xenakis, S. N. (1986). The military family in review: Context, risk, prevention. Journal of the American Academy of Child Psychology, 25, 225-234.
10. Bey, D. R., & Lange, J. (1974). Wailing wives, women under stress. American Journal of Psychiatry, 131, 283-286.
11. U. S. Bureau of Labor Statistics. (1987). Statistical abstract of the United States (107th ed.). Washington, DC: U.S. Department of Commerce.
12. Department of Defense (1996). Personal communication.
13. Thomas, M. D., & Thomas, P. J. (1991). Population statistics: Navy parents and children. (Tech. Rep. No. NPRDC-TN-92-4). San Diego, CA: Navy Personnel Research and Development Center.

14. Myrdal, A., & Klein, V. (1956). Women's two roles: Home and work. London: Routledge.
15. Moen, P. & Smith, K. R. (1986). Women at work: Commitment and behavior over the life course. Sociological Forum, 1, 450-476.
16. Berry, R. (1987, November, 19). Sky's the limit. Atlanta Constitution, pp. 1-C, 4-C.
17. Riggs, B. A. (1990). Routine-work-related absence: The effects on families. Marriage and Family Review, 15, 147-160.
18. DeMeis, D., Hock, E., & McBride, S. (1986). The balance of employment and motherhood: Longitudinal study of mother's feelings about separation from their first-born infants. Developmental Psychology, 22, 627-632.
19. Ainsworth, M. D. S. (1991). Attachment and other affectional bonds across the life cycle. In C. M. Parkes, J. Stevenson-Hinde, & P. Marris (Eds.). Attachment across the life cycle (pp. 33-51). New York: Routledge.
20. Thomas, P. J. (1997). Personal communication.
21. Wynd, C. A., & Dziedzicki, R. E. (1992). Heightened anxiety in army reserve nurses anticipating mobilization during operation desert storm. Military Medicine, 157, 630-634.
22. Bowlby, J. (1969). Attachment and loss: Vol. 1 Attachment. London: Gogarth Press.
23. Bowlby, J. (1973). Attachment and loss: Vol. 2. Separation: Anxiety and anger. New York: Basic Books.
24. Bowlby, J. (1980). Attachment and loss: Vol. 3. Loss. New York: Basic Books.
25. Main, M., & Weston, D. R. (1981). The quality of the toddler's relationship to mother and to father: Related to conflict behavior and the readiness to establish new relationship. Child Development, 52, 932-940.
26. Sroufe, L. A. (1985). Attachment classification from the perspective of infant-caregiver relationships and infant temperament. Child Development, 56, 1-14.
27. Vaughn, B., Egeland, B., Waters E., & Sroufe, L. A. (1979). Individual differences in infant-mother attachment in 12 and 18 months: Stability and change in families under stress. Child Development, 50, 971-975.
28. Wallerstein, J., & Blakslee, S. (1989). Second chances: Men, women, and children a decade after divorce. New York: Tichnor & Fields.

29. Belsky, J. (1988). The effects of infant day care reconsidered. Early Childhood Research Quarterly, 3, 235-272.
30. Dickerson, W. J., & Arthur, R. J. (1965). Navy families in distress. Military Medicine, 130, 894-898.
31. Waters, E., & Deane, K. (1985). Defining and assessing individual differences in attachment relationships: Q-methodology and the organization of behavior in infancy and early childhood. In I. Bretherton & E. Waters (Eds.), Growing points of attachment theory and research. Monographs of the Society for Research in Child Development, 50 (1-2, Serial No. 209).
32. Ainsworth, M. D., Bell, S. M., & Stayton, D. J. (1971). Individual differences in strange-situation behavior of one-year-olds. In H. R. Schaffer (Ed.), The origins of human social relations. New York: Academic Press.
33. Hock, E., McBride, S., & Gnezda, M. T., (1989). Maternal separation anxiety: Mother-infant separation from the maternal perspective. Child Development, 60, 793-802.
34. Deater-Deckard, K., Scarr, S., McCartney, K., & Eisenberg, M. (1994). Paternal separation anxiety: Relationships with parenting stress, child-rearing attitudes, and maternal anxieties. Psychological Science, 5, 341-346.
35. Hock, E., & Luz, W. J. (1997, April). Origins and developmental course of separation anxiety in mothers and fathers. Society for Research in Child Development, Washington, DC.
36. den Dulk (1980). Severe job related stress: Military enforced separations and adjustment. In E. J. Hunter (Ed.), Families under the flag: A review of military family literature. NY: Praeger.
37. Yeatman, G. W. (1981). Paternal separation and the military dependent child. Military Medicine, 146, 320-322.
38. Shinn, M. (1978). Father absence and children's cognitive development: Psychology Bulletin, 85, 295-324.
39. Cassidy, J., & Kobak, R. (1988). Avoidance and its relation to other defensive processes. In J. Belsky & T. Nezworski (Eds.), Clinical implications of attachment. Hillsdale, NJ: Erlbaum.
40. Hock, E., & DeMeis, D. K. (1990). Depression in mothers of infants: The role of maternal employment. Developmental Psychology, 26, 285-291.

41. Ainsworth, M. D., Bell, S. M., & Stayton, D. J. (1971). Individual differences in strange-situation behavior of one-year-olds. In H. R. Schaffer (Ed.), The origins of human social relations. New York: Academic Press.
42. Wolfe, J., Brown, P. J., & Kelley, J. M. (1993). Reassessing war stress: Exposure and the Persian Gulf War. Journal of Social Issues, 49, 15-31.
43. Hines, J. F. (1993). A comparison of clinical diagnoses among male and female soldiers deployed during the Persian Gulf War. Military Medicine, 158, 99-101.
44. Nice, D. S., & Hilston, S. M. (1990). Sex differences in health care requirements aboard U.S. Navy ships. Naval Health Research Center. San Diego, Report No. 90-2.
45. Conger, R. D., Lorenz, F. O., Elder, G., H., Simons, R. L., & Ge, X. (1993). Husband and wife differences in response to undesirable life events. Journal of Health and Social Behavior, 34, 71-88.
46. Fein, G. G., Gariboldi, A., & Boni, R. (1993). Antecedents of maternal separation anxiety. Merrill-Palmer Quarterly, 39, 481-495.
47. Crockenberg, S. (1981). Infant irritability, maternal responsiveness, and social support influences on the security of infant-mother attachment. Child Development, 52, 857-865.
48. Benn, R. K. (1986). Factors promoting secure attachment relationships between employed mothers and their sons. Child Development, 57, 1224-1231.
49. Erdwins, C. J., & Buffardi, L. C. (1994). Different types of day care and their relationship to maternal satisfaction, perceived support, and role conflict. Child and Youth Forum, 23, 41-54.
50. Shinn, M., Galinsky, E., & Gulcure, L. (1990). The role of child care centers in the lives of parents. New York: Families and Work Institute.
51. Buffardi, L. C., & Erdwins, C. J. (1993). Child care satisfaction, employer sensitivity, and spousal support: Linkages to work and family attitudes. Unpublished manuscript. Department of Psychology, George Mason University.
52. Harrell, J. E., & Ridley, C. A. (1975). Substitute child care, maternal employment, and the quality of mother-child interactions. Journal of Marriage and the Family, 37, 446-564.
53. Fish, M., & Belsky, J. (1991). Temperament and attachment revisited: Origin and meaning of separation intolerance at age three. American Journal of Orthopsychiatry, 61, 418-427.

54. Fox, N., Kimmerly, N., Schafer, W. (1991). Attachment to mother-Attachment to father: A meta-analysis. Child Development, 62, 210-225.
55. Frodi, A. (1983). Attachment behavior and sociability in premature and full-term infants. Infant Mental Health Journal, 4, 13-22.
56. Frodi, A., Bridges, L., & Shonk, S. (1989). Maternal correlates of infant temperament ratings and of infant-mother attachment: A longitudinal study. Infant Mental Health Journal, 10, 273-289.
57. Frodi, A., & Thompson, R. (1985). Infants' affective responses in the Strange Situation: Effects of prematurity and of quality of attachment. Child Development, 56, 1280-1291.
58. Himmelfarb, S., Hock, E., & Wenar, C. (1985). Infant temperament and noncompliant behavior at four years: A longitudinal study. Genetic, Social, and General Psychology Monographs, 111, 7-21.
59. Barnett, B., Schaafsma, M. F., Guzman, A. M., & Parker, G. B. (1991). Maternal anxiety: A 5-year review of an intervention study. Journal of Child Psychology and Psychiatry, 32, 423-438.
60. McDevitt, S., & Carey, W. (1978). The measurement of temperament in 3-7 year old children. Journal of Child Psychology and Psychiatry, 19, 245-253.
61. Duntzman, G. H., Bray, R. W., Wood, L., Griffith, J. D., Ostrove, N. M. (1990). Exploratory models of reenlistment intentions from the 1985 DoD survey of enlisted personnel. Personnel Utilization Technical Area Paper 90-134. Alexandria, VA: U. S. Army Research Institute for the Behavioral and Social Sciences.
62. Etheridge, R. M. (1989). Family factors affecting retention: A review of the literature. Personnel Utilization Technical Area Research Report MD 1903-87-C-0540.
63. Anderson, M., Halecki, J., Berndt, A., & Kelley, M. (1995, May). The influence of career commitment and child rearing on retention for enlisted women in the Navy. Virginia Academy of Sciences, Herndon, VA.
64. Cohen, S., Kamarck, T., & Mermelstein, P. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 385-396.
65. Greenhaus, J. H. (1971). An investigation of career salience in vocational behavior. Journal of Vocational Behavior, 1, 209-216.

66. Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.
67. Hock, E., Schrizinger, M. B., & Lutz, W. (1992). Dimensions of family relationships associated with depressive symptomatology in mothers of young children. Psychology of Women Quarterly, 16, 229-241.
68. Sinha, D. A. (1992). Sinha's anxiety test three decades after. Journal of Personality and Clinical Studies, 8, 1-6.
69. Slater, M. A., & Power, T. G. (1987). Multidimensional assessment of parenting in single-parent families. In J. Vincent (Ed.), Advances in family, intervention, assessment, and theory (Vol. 4., pp. 197-228). Greenwich, CT: JAI.
70. Abidin, R. R. (1990). Parenting Stress Index manual. Charlottesville, VA: Pediatric Psychology Press.
71. Brookhart, J., & Hock, E. (1976). The effects of experimental context and experiential background on infants' behavior toward their mothers and a stranger. Child Development, 47, 333-340.
72. Ainsworth, M. D., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. Child Development, 41, 49-67.
73. Ainsworth, M. D., Bell, S. M., & Stayton, D. J. (1971). Individual differences in strange-situation behavior of one-year-olds. In H. R. Schaffer (Ed.), The origins of human social relations. New York: Academic Press.
74. Rowe, D. C., & Plomin, R. (1977). Temperament in early childhood. Journal of Personality Assessment, 41, 150-156.
75. Achenbach, T. M. (1992). Manual for the Child Behavior Checklist/2-3 and 1992 Profile. Burlington, VT: University of Vermont Department of Psychiatry.
76. Achenbach, T. M. (1991). Manual for the Child Behavior Checklist and Revised Child Behavior Profile. Burlington, VT: Thomas N. Achenbach, Department of Psychiatry, University of Vermont.
77. Achenbach, T. M., Edelbrock, C., & Howell, C. T. (1987). Empirically based assessment of the behavioral/emotional problems of 2-3-year-old children. Journal of Abnormal Child Psychology, 15, 629-650.

78. Joreskog, K. B., & Sorbom, D. (1993). Structural equation modeling with SIMPLIS command language. Erlbaum: Hillsdale, NJ.
79. Gretherton, I., Biringen, Z., Ridgeway, D., Masline, C., & Sherman, M. (1989). Attachment: The parental perspective. Infant Mental Health Journal, 10, 203-221.

Appendix A

PREDEPLOYMENT INTERVIEW (DEPLOYMENT SUBJECTS)

Let me just make sure I have the information about your child correct. Your child's name is "_____", and it's a she/he? And your child is how old? _____. And you are single/divorced/married?

I'd like to start with a few questions about your child care arrangements while you are at work, then ask about who will be keeping "child's name" while you are on deployment. Please feel free to say whatever you want. There are no right or wrong answers. To make it easier, on some of the questions I'll show you a card and ask you to pick the number that best matches how you feel.

1a. Who typically cares for "child's name" while you are at work?

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. other relative (specify) _____
- e. babysitter/neighbor who is not a relative
- f. licensed in-home care provider
- g. licensed Navy home care provider
- h. Navy Child Development Center
- i. other non-military daycare center
- j. other (specify) _____

1b. How comfortable are you with the *quality* of the care your child receives while you are at work?

(SHOW CARD 1)

Very Uncomfortable

Very Comfortable

1 2 3 4 5 6 7

1c. How many different full-time babysitters/daycare teachers has "child's name" had in the last year? _____

1d. How long has your child been with his/her current full-time babysitter/daycare teacher?

1e. Do you ever feel guilty about leaving "child's name" to go to work? YES NO

IF YES TO 1e., ASK 1f.

1f. How much guilt do you feel about leaving "child's name" to go to work?

(SHOW CARD 2)

No Guilt							Very Much Guilt
1	2	3	4	5	6	7	

1g. Overall, how difficult has child care been?

(SHOW CARD 3)

Not Difficult							Very Difficult
1	2	3	4	5	6	7	

1h. Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements? _____ days

1i. Do you have any comments, concerns, or suggestions about child care?

2a. Who will be "child's name's" primary caregiver during your upcoming deployment?

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. other relative (specify) _____
- e. babysitter/neighbor who is not a relative
- f. licensed in-home care provider
- g. licensed Navy home care provider
- h. Navy Child Development Center
- i. other non-military daycare center
- j. other (specify) _____

2b. How comfortable are you with the *quality* of the care your child will receive from ("child's primary caregiver") while you are on deployment?
(SHOW CARD 4)

Very Uncomfortable Very Comfortable
 1 2 3 4 5 6 7

2c. Do you ever feel guilty about leaving "child's name" to go to on deployment? _____ YES _____ NO

IF YES TO 2c., ASK 2d.

2d. How much guilt do you feel about leaving "child's name" to go to on deployment?
(SHOW CARD 5)

No Guilt Very Much Guilt
 1 2 3 4 5 6 7

2e. Overall, how difficult has getting someone to care for "child's name" during deployment been?

(SHOW CARD 6)

Not Difficult Very Difficult
 1 2 3 4 5 6 7

3. What effect do you think long-term deployment will have on your immediate family?

4a. When you joined the Navy, at what point did you expect to get assigned to sea duty?
(read choices)

- a. initially
- b. at some point in your enlistment
- c. at some point in your career
- d. never

4b. How many long-term deployments (3 months or more) have you experienced previously?

4c. Have you experienced any long-term deployments (3 months or more) in the *last year*?
_____. If yes, how many? _____

4d. How much *total time* have you been away from your child (in the study) *in the last year* because of work separations/deployments? _____ months _____ weeks _____ days

4e. When was the *last time* you were away from your child because of work? _____ DATE

4f. How *long* were you away from your child the last time? _____

IF MOTHER WAS AWAY FROM CHILD DURING THE PAST YEAR, ASK 4g.

4g. Did your immediate family experience *any difficulties/strains* as a result of these work-related separations/deployments *in the last year*? _____

Now I'd like to ask you a few questions about "child's name" health in the past month.

5a. Has your child's doctor mentioned that "child's name" has any health problems (e.g., for example asthma/tonsillitis)? _____ YES _____ NO

IF YES TO 5a, ASK 5b

5b. What health problems has "child's name's" child's doctor mentioned?

5c. As compared to the past year, have you noticed any sudden changes in "child's name's" health *in the past month*?

_____ yes _____ no

IF YES TO 5c, ASK 5d

5d. What sudden changes have you noticed in "child's name's" health *in the past month*?

Now I'd like to ask a few questions about "child's name" behavior and mood in the past month.

6a. During the past month, has "child's name's" babysitter/teacher mentioned any changes in "child's name" behavior or disposition--how difficult/fussy/happy he or she has been?
_____ yes _____ no

IF YES TO 6a, ASK 6b

6b. What changes has your *child's* babysitter/teacher noticed in "child's name" during the past month? _____

7a. Have *you* noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been during the past month?
_____ yes _____ no

IF YES TO 7a, ASK 7b

7b. What changes in "child's name" have *you* noticed in the past month? _____

Now I'd like to ask you a few questions about being a mother.

8a. Which of the following is *most* important to you? Which is *second most* important? (read choices) (put a "1" for most important, "2" for second most important, and "3" for least important)

_____ being married
_____ being a mother
_____ working

8b. How would you have felt if you couldn't have children? Why? _____

8c. Would you have adopted? Why or why not?

8d. Have you always wanted to have children? Why or why not?

8e. How important is it to you to be a mother? Why or why not?

8f. How has being a mother changed your life?

8g. How complete would your life be if you weren't a mother?

8h. In your opinion what is the best age for a woman to have her first child? _____

8i. In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?

(read choices)

- a. anytime
- b. on sea duty
- c. on shore duty
- d. after making Petty Officer
- e. other (specify) _____

- 9f. How satisfied are you with the practical support you receive *from just friends* (for example, babysitting, loaning you some money, helping when your car breaks down)?
(SHOW CARD 10)

Very Dissatisfied Very Satisfied
1 2 3 4 5 6 7

FOR SINGLE/DIVORCED/SEPARATED PARENTS ASK ONLY 10 AND 11)

10. Please rate the quality of your relationship with "child's name's" father.
(SHOW CARD 13)

Very Poor Very Good
1 2 3 4 5 6 7

11. How much contact has "child's name" had with his or her father?
(SHOW CARD 14)

- a. No contact since birth
- b. Once a year
- c. Two or three times per year
- d. Once a month
- e. Twice a month
- f. Once a week
- g. More than once a week

12. How likely will you be to reenlist at your EAOS? (Expiration of Active Obligated Service)(SHOW CARD 15)

Very UnLikely Very Likely
to Reenlist to Reenlist
1 2 3 4 5 6 7

13. Why do you plan to leave (response of 1-3)/stay in (response of 5-7) the Navy?
If respondent answers 4, why are you unsure about staying in the Navy?

14. Please rate your *overall* Navy experience up to this point in your career.

(SHOW CARD 16)

Very Poor

Very Good

1

2

3

4

5

6

7

Appendix B

INITIAL INTERVIEW (CONTROL SUBJECTS)

Let me just make sure I have the information about your child correct. Your child's name is "_____", and it's a she/he? And your child is how old? _____. And you are single/divorced/married?

I'd like to start with a few questions about your child care arrangements while you are at work, then ask about who will be keeping "child's name" while you are on deployment. Please feel free to say whatever you want. There are no right or wrong answers. To make it easier, on some of the questions I'll show you a card and ask you to pick the number that best matches how you feel.

1a. Who typically cares for "child's name" while you are at work?

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. other relative (specify) _____
- e. babysitter/neighbor who is not a relative
- f. licensed in-home care provider
- g. licensed Navy home care provider
- h. Navy Child Development Center
- i. other non-military daycare center
- j. other (specify) _____

1b. How comfortable are you with the *quality* of the care your child receives while you are at work?

(SHOW CARD 1)

Very Uncomfortable

Very Comfortable

1 2 3 4 5 6 7

1c. How many different full-time babysitters/daycare teachers has "child's name" had in the last year? _____

1d. How long has your child been with his/her current full-time babysitter/daycare teacher?

1e. Do you ever feel guilty about leaving "child's name" to go to work? _____ YES _____ NO

IF YES TO Id., ASK Ie.

1f. How much guilt do you feel about leaving "child's name" to go to work?

(SHOW CARD 2)

No Guilt					Very Much Guilt	
1	2	3	4	5	6	7

1g. Overall, how difficult has child care been?

(SHOW CARD 3)

Not Difficult					Very Difficult	
1	2	3	4	5	6	7

1h. Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements? _____ days

1i. Do you have any comments, concerns, or suggestions about child care?

2a. When you joined the Navy, at what point did you expect to get assigned to sea duty?

(read choices)

- a. initially
- b. at some point in your enlistment
- c. at some point in your career

2b. How many long-term deployments (3 months or more) have you experienced previously? _____

2c. Have you experienced any long-term deployments (3 months or more) in the *last* year? _____. If yes, how many? _____

2d. How much *total time* have you been away from your child (in the study) *in the last year* because of work separations/deployments? _____ months _____ weeks _____ days

2e. When was the *last time* you were away from your child because of work? _____ DATE

2f. How *long* were you away from your child the last time? _____

IF MOTHER WAS AWAY FROM CHILD DURING THE PAST YEAR, ASK 2G.

2g. Did your immediate family experience *any difficulties/strains* as a result of these work-related separations/deployment *in the last year*? _____

Now I'd like to ask you a few questions about "child's name" health in the past month.

3a. Has your child's doctor mentioned that "child's name" has any health problems (e.g., for example asthma/tonsillitis)? _____ YES _____ NO

IF YES TO 3a, ASK 3b

3b. What health problems has "child's name's" doctor mentioned?

3c. As compared to the past year, have you noticed any sudden changes in "child's name's" health *in the past month*?

_____ yes _____ no

IF YES TO 3c, ASK 3d

3d. What sudden changes have you noticed in "child's name's" health *in the past month*?

Now I'd like to ask a few questions about "child's name" behavior and mood in the past month.

4a. *During the past month*, has "child's name's" babysitter/teacher mentioned any changes in "child's name" behavior or disposition--how difficult/fussy/happy he or she has been?

_____ yes _____ no

IF YES TO 4a, ASK 4b

4b. What changes has you *child's babysitter/teacher* noticed in "child's name" *during the past month*?

5a. Have *you* noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been *during the past month*?

_____ yes _____ no

IF YES TO 5a, ASK 5b

5b. What changes in "child's name" have *you* noticed *in the past month*?

Now I'd like to ask you a few questions about being a mother.

6a. Which of the following is *most* important to you? Which is *second most* important?

(READ LIST) (PUT "1" FOR MOST IMPORTANT, "2" FOR SECOND MOST IMPORTANT, AND "3" FOR LEAST IMPORTANT.)

- a. _____ being married
- b. _____ being a mother
- c. _____ working

6b. How would you have felt if you couldn't have children? Why?

6c. Would you have adopted? Why or why not?

6d. Have you always wanted to have children? Why or why not?

6e. How important is it to you to be a mother? Why or why not?

6f. How has being a mother changed your life?

6g. How complete would your life be if you weren't a mother?

6h. In your opinion, what is the best age for a woman to have her first child? _____

6i. In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?

(read choices)

- a. anytime
- b. on sea duty
- c. on shore duty
- d. after making Petty Officer
- e. other (specify) _____

Now I'd like to ask a few questions about you.

- 7a. How satisfied are you with the emotional support you *receive from "child's name's" father* (for example, advice when you have a problem, suggestions about parenting)?
(SHOW CARD 4)

Very Dissatisfied Very Satisfied
1 2 3 4 5 6 7

- 7b. How satisfied are you with emotional support you receive *family members other than "child's name's" father* (for example, advice when you have a problem, suggestions about parenting)?
(SHOW CARD 5)

Very Dissatisfied Very Satisfied
1 2 3 4 5 6 7

- 7c. How satisfied are you with emotional support you receive *from just friends?* (for example, advice when you have a problem, suggestions about parenting)?
(SHOW CARD 6)

Very Dissatisfied Very Satisfied
1 2 3 4 5 6 7

- 7d. How satisfied are you with the practical support you *receive from "child's name's" father?* (for example, babysitting, loaning you some money when you need it, helping when your car breaks down)?
(SHOW CARD 7)

Very Dissatisfied Very Satisfied
1 2 3 4 5 6 7

- 7e. How satisfied are you with the practical support you receive *from family members other than "child's name's" father* (for example, babysitting, loaning you some money, helping when your car breaks down)?
(SHOW CARD 8)

Very Dissatisfied Very Satisfied
1 2 3 4 5 6 7

7f. How satisfied are you with the practical support you receive *from just friends*
 (for example, babysitting, loaning you some money when you need it, helping
 when your car breaks down)?
 (SHOW CARD 9)

Very Dissatisfied							Very Satisfied
1	2	3	4	5	6	7	

FOR SINGLE/DIVORCED/SEPARATED PARENTS ONLY ASK 8 AND 9)

8. Please rate the quality of your relationship with “child’s name’s” father.
 (SHOW CARD 10)

Very Poor						Very Good
1	2	3	4	5	6	7

9. How much contact has “child’s name’s” had with his or her father?
 (SHOW CARD 11)

- a. No contact since birth
- b. Once a year
- c. Two or three times per year
- d. Once a month
- e. Twice a month
- f. Once a week
- g. More than once a week

10. How likely will you be to reenlist at your EAOS? (Expiration of Active Obligated
 Service)(SHOW CARD 12)

Very UnLikely to Reenlist						Very Likely to Reenlist
1	2	3	4	5	6	7

11. Why do you plan to leave (response of 1-3)/stay in (response of 5-7) the Navy?
If respondent answers 4, why are you unsure about staying in the Navy?

12. Please rate your *overall* Navy experience up to this point in your career.

(SHOW CARD 13)

Very Poor

Very Good

1

2

3

4

5

6

7

Appendix C

Questions Regarding Shipboard Pregnancy

These questions are prefaced by explaining that we have heard that sometimes women on ship duty "get out" of ship duty by getting pregnant. We also explain carefully that her answers to these questions about pregnancy are separated from her file and put in a packet with all other participants. We reiterate that this information as with all information is confidential.

1. Again, we've heard that sometimes Navy women get pregnant to avoid sea duty. What is your opinion about this?

2. Do you know anyone personally who has gotten pregnant to avoid sea duty? ____ YES ____ NO
If yes, what happened exactly?

3. If the mother has been on ship duty now or at some point in her career, ask "Have you ever gotten pregnant to get off sea duty?" ____ YES ____ NO
If yes, what happened exactly?

Appendix D

MID-DEPLOYMENT INTERVIEW (DEPLOYMENT SUBJECTS)

(to be completed at mid-deployment by the child's *primary* caregivers)

1. Let me make sure my information is correct. You are “child’s name”:

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. child's babysitter
- e. friend of mother
- f. other relative _____
- g. other

2. How long have you been the person *most responsible* for “child’s name” care? _____

3. With one being very little and seven being very much, how much *experience* would you say that you have in caring for young children?

Very Little

Very Much

1	2	3	4	5	6	7
---	---	---	---	---	---	---

4. With one being very uncomfortable and seven being very comfortable, how *comfortable* do you feel in caring for “child’s name”?

Very Uncomfortable

Very Comfortable

1 2 3 4 5 6 7

- 5a. Did "child's name" respond to his/her mom's leaving for deployment? (or for out of state relatives, right after his mom left him/her to go back to the ship?) YES NO

IF YES TO 5A, ASK 5B.

- 5b. How did “child’s name” respond when his/her mother *initially left*?

[illegible]

6. How has "child's name" reacted to his/her mother's absence *in the last month*?

7. Does "child's name" go to a babysitter or daycare during the day? _____ YES _____ NO
or Let me just make sure I still have the correct information about "child's
name" childcare. Is "person's name" still caring for "child's name" while you are at
work?

_____ YES _____ NO

Who is taking care of "child's name" now? (Get childcare provider's name
and address)

_____ (name) _____

_____ (address) _____

_____ (phone) _____

Now I'd like to ask you a few questions about "child's name" health in the past month.

8a. Has "child's name's" doctor mentioned that he/she has any health problems (e.g.,
for example asthma/tonsillitis)? _____ YES _____ NO

IF YES TO 8a, ASK 8b

8b. What health problems has "child's name's" doctor mentioned?

9a. As compared to the past year, have you noticed any sudden changes in "child's name's" health *in the past month*?

_____ yes _____ no

IF YES TO 9a, ASK 9b

9b. What sudden changes have you noticed in "child's name's" health *in the past month*?

Now I'd like to ask a few questions about "child's name" behavior and mood in the past month.

ONLY ASK 10a AND 10b IF THE CHILD HAS A BABYSITTER/DAYCARE TEACHER

10a. *During the past month*, has "child's name's" babysitter/teacher mentioned any changes in "child's name" behavior or disposition--how difficult/fussy/happy he or she has been?

_____ yes _____ no

IF YES TO 10a, ASK 10b

10b. What changes has your *child's babysitter/teacher* noticed in "child's name" *during the past month*?

10a. Have *you* noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been *during the past month*?

_____ yes _____ no

IF YES TO 11a, ASK 11b

11a. What changes in "child's name" have *you* noticed *in the past month*?

Appendix E

MID-DEPLOYMENT INTERVIEW (SHORE SUBJECTS)

Let me just make sure I still have the correct information about "child's name" childcare.
Is "person's name" still caring for "child's name" while you are at work?

_____ YES _____ NO

If no, who is taking care of "child's name" now? (Get childcare provider's name and address)

(name)

(address)

(phone)

Now I'd like to ask you a few questions about "child's name" health in the past month.

2a. Has "child's name's" doctor mentioned that he/she has any health problems (e.g.,
for example asthma/tonsillitis) YES NO

IF YES TO 2a, ASK 2b

2b. What health problems has "child's name's" doctor mentioned?

2c. As compared to the past year, have you noticed any sudden changes in "child's name's" health *in the past month*?

_____ yes _____ no

IF YES TO 2c, ASK 2d

2d. What sudden changes have *you* noticed in "child's name's" health *in the past month*?

Now I'd like to ask a few questions about "child's name" behavior and mood in the past month.

3a. *During the past month*, has "*child's name's*" *babysitter/teacher* mentioned any changes in "*child's name*" behavior or disposition--how difficult/fussy/happy he or she has been?

_____ yes

_____ no

IF YES TO 3a, ASK 3b

3b. What changes has your *child's babysitter/teacher* noticed in "*child's name*" *during the past month*?

4a. Have *you* noticed any changes in "*child's name's*" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been *during the past month*?

_____ yes

_____ no

IF YES TO 4a, ASK 4b

4b. What changes in "*child's name*" have *you* noticed *in the past month*?

Appendix F

POSTDEPLOYMENT INTERVIEW (DEPLOYMENT SUBJECTS)

Let me just make sure I have the information about your child correct. Your child's name is "_____", and it's a she/he? And your child is how old? _____. And you are single/divorced/married?

I'd like to start with a few questions about your child care arrangements while you are at work and then ask a few questions specifically about child care while you were on deployment. Please feel free to say whatever you want. There are no right or wrong answers.

1a. Who typically cares for "child's name" while you are at work?

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. other relative (specify) _____
- e. babysitter/neighbor who is not a relative
- f. licensed in-home care provider
- g. licensed Navy home care provider
- h. Navy Child Development Center
- i. other non-military daycare center
- j. other (specify) _____

1b. Is your child's provider a licensed provider? _____ YES _____ NO

I'd like to ask you a few questions about child care cost for all children under 13 in your household.

1c. How much do you usually pay for this arrangement (what she has mentioned in question 1a) *per week* for the target child? _____

1d. Think about other times that you must have child care. What is the total amount that you pay for child care *per week* for the target child including the cost of your regular child care during working (8 to 5) hours? _____

IF THE MOTHER HAS OTHER CHILDREN BESIDES THE TARGET CHILD UNDER 13, ASK 1e.

1e. What is the total amount that you must pay for child care *per week* for all of your children?

1f. How many hours do you work per week? _____

1g. How many weeks do you work per year? _____

1h. How much travel time (in minutes) do you need on a daily basis to reach your child care provider? _____

1i. How comfortable are you with the *quality* of the care your child receives while you are at work?

Very Uncomfortable

Very Comfortable

1 2 3 4 5 6 7

1j. How many different full-time babysitters/daycare teachers has "child's name" had in the last year? _____

1k. How long has your child been with his/her current full-time babysitter/daycare teacher?

1l. Did your babysitter change while you were on deployment? _____ YES _____ NO

IF YES TO 1l, ASK 1m.

1m. How many different babysitters did "child's name" have while you were on deployment?

1n. Do you ever feel guilty about leaving "child's name" to go to work? _____ YES _____ NO

IF YES TO 1n., ASK 1o.

1o. How much guilt do you feel about leaving "child's name" to go to work?

No Guilt

Very Much Guilt

1 2 3 4 5 6 7

1p. Overall, how difficult has child care been?

Not Difficult

Very Difficult

1 2 3 4 5 6 7

1q. Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements? _____ days

1r. Do you have any comments, concerns, or suggestions about child care?

2a. Who was "child's name" *primary caregiver* during the deployment?

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. other relative (specify) _____
- e. babysitter/neighbor who is not a relative
- f. licensed in-home care provider
- g. licensed Navy home care provider
- h. Navy Child Development Center
- i. other non-military daycare center
- j. other (specify) _____

2b. How comfortable were you with the *quality* of the care your child received from ("child's primary caregiver") while you were on deployment?

Very Uncomfortable							Very Comfortable
1	2	3	4	5	6	7	

2c. Did you ever feel guilty about leaving "child's name" to go to on deployment? ☐ YES ☐ NO

IF YES TO 2c., ASK 2d.

2d. How much guilt did you feel about leaving "child's name" to go to on deployment?

No Guilt						Very Much Guilt
1	2	3	4	5	6	7

2e. Did your child's primary caregiver *change* during the deployment? ☐ YES ☐ NO

IF NO, SKIP TO QUESTION 2j.

2f. Prior to deployment, did you suspect that "primary caregiver from 2a" might not work out? ☐ YES ☐ NO

2g. Did you request emergency leave to make new arrangements? ☐ YES ☐ NO
 Was the emergency leave granted? ☐ YES ☐ NO

If yes, which ones? _____

Not Difficult 1 2 3 4 5 6 7 Very Difficult

[illegible]

60

Now I'd like to ask you a few questions about "child's name" health during the deployment and since you got back from deployment.

5a. As compared to the past year, were there any sudden changes in "child's name" health *while you were on deployment*?

_____ yes _____ no

IF YES TO 5a, ASK 5b

5b. What sudden changes in "child's name's" health took place *while you were on deployment*?

5c. As compared to the past year, were there any sudden changes in "child's name's" health *since you returned from deployment*?

_____ yes _____ no

IF YES TO 5c, ASK 5d.

5d. What sudden changes in "child's name's" health have you noticed *since you returned from deployment*?

Now I'd like to ask a few questions about "child's name" behavior and mood first while you were on deployment and since you returned from deployment.

6a. Think back to while you were gone on deployment. As compared to the past year, did "child's name's" *babysitter/teacher* mention any changes in "child's name" behavior or disposition--how difficult/fussy/happy he or she was *while you were gone on deployment*?

_____ yes _____ no

IF YES TO 6a, ASK 6b

6b. What changes did your *child's babysitter/teacher* notice in "child's name" *while you were gone on deployment*?

6c. Since you returned from deployment, has "child's name's" babysitter/teacher mentioned any changes in "child's name" behavior or disposition--how difficult/fussy/happy he or she has been?

_____ yes

_____ no

IF YES TO 6c, ASK 6d

6d. What changes has your *child's babysitter/teacher* noticed in "child's name" *since you returned from deployment*? _____

7a. Have *you* noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has *been since you returned from deployment*?

_____ yes

_____ no

IF YES TO 7a, ASK 7b.

7b. What changes in "child's name" have *you* noticed *since you returned from deployment*? _____

7c. How has "child's name" responded to you *since you got back from deployment*? _____

7d. Have you noticed any changes in your relationship with "child's name" *since you got back from deployment*? _____

7e. Did anything happen to "child's name" or any event occur that could have negatively impacted "child's name" during the deployment? _____ YES _____ NO

IF YES to 7e., ASK 7f.

IF NO to 7e, SKIP TO QUESTION 8a.

7f. What happened? _____

7g. How did you handle this event?

7h. When (event from 7g happened) did you involve the people in your chain of command?

_____ YES _____ NO

7i. How supportive were the people in your chain of command?

Not Supportive

Very Supportive

1 2 3 4 5 6 7

Now I'd like to ask you a few questions about being a mother.

8a. Which of the following is *most* important to you? Which is *second most* important?

(read choices) (put a "1" for most important, "2" for second most important, and "3" for least important)

_____ being married
_____ being a mother
_____ working

8b. How would you have felt if you couldn't have children? Why?

8c. Would you have adopted? Why or why not?

8d. Have you always wanted to have children? Why or why not?

8e. How important is it to you to be a mother? Why or why not?

8f. How has being a mother changed your life?

8g. How complete would your life be if you weren't a mother?

8h. In your opinion what is the best age for a women to have her first child? _____

8i. In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?

(read choices)

- a. anytime
- b. on sea duty
- c. on shore duty
- d. after making Petty Officer
- e. other (specify) _____

Now I'd like to ask a few questions about you.

9a. How satisfied are you with the emotional support you *receive from "child's name's" father* (for example, advice when you have a problem, suggestions about parenting)?

Very Dissatisfied

1

2

3

4

5

6

Very Satisfied

7

11. How much contact has "child's name" had with his or her father?

- a. No contact since birth
- b. Once a year
- c. Two or three times per year
- d. Once a month
- e. Twice a month
- f. Once a week
- g. More than once a week

Finally, I'd like to ask you a few questions about your deployment and your plans for staying in/leaving the Navy.

12. Was the deployment worthwhile in terms of your Navy job? _____ YES _____ NO

13. Did you gain new skills or knowledge as a result of the deployment? _____ YES _____ NO

14. Do you feel more "integrated" into the Navy now? _____ YES _____ NO

15a. Did your plans in regard to staying in/leaving the Navy change? _____ YES _____ NO

IF YES TO 15a, ASK 15b.

15b. How have your plans for staying in/leaving the Navy changed?

16. How likely will you be to reenlist at your EAOS? (Expiration of Active Obligated Service)

Very UnLikely
to Reenlist

Very Likely
to Reenlist

1 2 3 4 5 6 7

17. Why do you plan to leave (response of 1-3)/stay in (response of 5-7) the Navy?

If respondent answers 4, why are you unsure about staying in the Navy?

18. Please rate your *overall* Navy experience up to this point in your career.

Very Poor

1

2

3

4

5

6

Very Good

7

19 Do you think that the Navy policy regarding women at sea should be changed? ____ YES ____ NO

20. If yes, how? _____

Appendix G

POSTDEPLOYMENT INTERVIEW (CONTROL SUBJECTS)

Let me just make sure I have the information about your child correct. Your child's name is "_____", and it's a she/he? And your child is how old? _____. And you are single/divorced/married? _____

I'd like to start with a few questions about your child care arrangements while you are at work. Please feel free to say whatever you want. There are no right or wrong answers.

1a. Who typically cares for "child's name" while you are at work?

- a. child's father
- b. child's maternal grandmother
- c. child's paternal grandmother
- d. other relative (specify) _____
- e. babysitter/neighbor who is not a relative
- f. licensed in-home care provider
- g. licensed Navy home care provider
- h. Navy Child Development Center
- i. other non-military daycare center
- j. other (specify) _____

1b. Is your child's provider a licensed provider? _____ YES _____ NO

I'd like to ask you a few questions about child care cost for all children under 13 in your household.

1c. How much do you usually pay for this arrangement (what she has mentioned in question 1a) *per week* for the target child? _____

1d. Think about other times that you must have child care. What is the total amount that you pay for child care *per week* for the target child including the cost of your regular child care during working (8 to 5) hours? _____

IF THE MOTHER HAS OTHER CHILDREN BESIDES THE TARGET CHILD UNDER 13,
ASK 1e.

1e. What is the total amount that you must for child care *per week* for all of your children?

1f. How many hours do you work per week? _____

1g. How many weeks do you work per year? _____

1h. How much travel time (in minutes) do you need on a daily basis to reach your child care provider? _____

1i. How comfortable are you with the *quality* of the care your child receives while you are at work?

Very Uncomfortable

1

2

3

4

5

6

7

Very Comfortable

1j. How many different full-time babysitters/daycare teachers has "child's name" had in the last year? _____

1k. How long has your child been with his/her current full-time babysitter/daycare teacher?

1l. Did you babysitter change since the very first time we interviewed you? _____ YES _____ NO

IF YES TO 1l, ASK 1m.

1m. How many different babysitters has "child's name" have since the first time we interviewed you? _____

1n. Do you ever feel guilty about leaving "child's name" to go to work? _____ YES _____ NO

IF YES TO 1n., ASK 1o.

1o. How much guilt do you feel about leaving "child's name" to go to work?

No Guilt

1

2

3

4

5

6

7

Very Much Guilt

1p. Overall, how difficult has child care been?

Not Difficult

1

2

3

4

5

6

7

Very Difficult

1q. Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements? _____ days

1r. Do you have any comments, concerns, or suggestions about child care?

2a. How much *total time* have you been away from "child name" (child in the study) *in the last year* because of work separations/deployments? _____ months _____ weeks _____ days

2b. When was the *last time* you were away from your child because of work? _____ DATE
(Get exact number of days that she has been back from deployment?)

2c. How *long* were you away from your child the last time? _____

Now I'd like to ask you a few questions about "child's name" health in the past month.

3a. Has your child's doctor mentioned that "child's name" has any health problems (e.g., for example asthma/tonsillitis) in the past month? _____ YES _____ NO

IF YES TO 3a, ASK 3b

3b. What health problems has "child's name's" doctor mentioned?

3c. As compared to the past year, have you noticed any sudden changes in "child's name's" health *in the past month*?
_____ yes _____ no

IF YES TO 3c, ASK 3d

3d. What sudden changes have you noticed in "child's name's" health *in the past month*?

Now I'd like to ask a few questions about "child's name" behavior and mood in the past month.

4a. *During the past month*, has "child's name's" babysitter/teacher mentioned any changes in "child's name" behavior or disposition--how difficult/fussy/happy he or she has been?
_____ yes _____ no

IF YES TO 4a, ASK 4b

4b. What changes has your *child's babysitter/teacher* noticed in "child's name" *during the past month*? _____

5a. Have *you* noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been *during the past month*?

_____ yes _____ no

IF YES TO 5a, ASK 5b

5b. What changes in "child's name" have *you* noticed *in the past month*?

Now I'd like to ask you a few questions about being a mother.

6a. Which of the following is *most* important to you? Which is *second most* important? (**read choices**) (put a "1" for most important, "2" for second most important, and "3" for least important)

_____ being married
_____ being a mother
_____ working

6b. How would you have felt if you couldn't have children? Why?

6c. Would you have adopted? Why or why not?

6d. Have you always wanted to have children? Why or why not?

6e. How important is it to you to be a mother? Why or why not?

6f. How has being a mother changed your life?

6g. How complete would your life be if you weren't a mother?

6h. In your opinion what is the best age for a woman to have her first child? _____

6i. In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?

(read choices)

- a. anytime
- b. on sea duty
- c. on shore duty
- d. after making Petty Officer
- e. other (specify) _____

Now I'd like to ask a few questions about you.

7a. How satisfied are you with the emotional support you *receive from "child's name's" father* (for example, advice when you have a problem, suggestions about parenting)?

Very Dissatisfied

1

2

3

4

5

6

Very Satisfied

7

9. How much contact has "child's name's" had with his or her father?

- a. No contact since birth
- b. Once a year
- c. Two or three times per year
- d. Once a month
- e. Twice a month
- f. Once a week
- g. More than once a week



10a. Have you plans in regards to staying in/leaving the Navy change since the first time we interviewed you? _____ YES _____ NO

IF YES TO 10a, ASK 10b.

10b. How have your plans for staying in/leaving the Navy changed? _____

11. How likely will you be to reenlist at your EAOS? (Expiration of Active Obligated Service)

Very UnLikely
to Reenlist

1

2

3

4

5

6

7

Very Likely
to Reenlist

12. Why do you plan to leave (response of 1-3)/stay in (response of 5-7) the Navy?

If respondent answers 4, why are you unsure about staying in the Navy?

13. Please rate your *overall* Navy experience up to this point in your career.

Very Poor

1

2

3

4

5

6

7

Very Good

14. Do you think that the Navy policy regarding women at sea should be changed? _____ YES _____ NO

If yes, how? _____

Appendix H

90-Item Attachment Behavior Q-Sort Scale

Mothers are asked to sort each of the following “cards” into 9 piles from “most like the child” to “least like the child.”

1. Child readily shares with mother or lets her hold things if she asks to.
2. When child returns to mothers after playing, he is sometimes fussy for no clear reason.
3. When he is upset or injured, child will accept comforting from adults other than mother.
4. Child is careful and gentle with toys and pets.
5. Child is more interested in people than in things.
6. When child is near mother and sees something he wants to play with, he fusses or tries to drag mother over to it.
7. Child laughs and smiles easily with a lot of different people.
8. When child cries, he cries hard.
9. Child is lighthearted and playful most of the time.
10. Child often cries or resists when mother takes him to bed for naps or at night.
11. Child often hugs or cuddles against mother, without her asking or inviting him to do so.
12. Child quickly gets used to people or things that initially made him shy or frightened him.
13. When the child is upset by mother's leaving, he continues to cry or even gets angry after she is gone.
14. When child finds something new to play with, he carries it to mother or shows it to her from across the room.
15. Child is willing to talk to new people, show them toys, or show them what he can do, if mother asks him to.
16. Child prefers toys that are modeled after living things (e.g., dolls, stuffed animals).
17. Child quickly loses interest in new adults if they do anything that annoys him.
18. Child follows mother's suggestions readily, even when they are clearly suggestions rather than orders.
19. When mother tells child to bring or give her something, he obeys.
20. Child ignores most bumps, falls, or startles.
21. Child keeps track of mother's location when he plays around the house.
22. Child acts like an affectionate parent toward dolls, pets, or infants.
23. When mother sits with other family members, or is affectionate with them, child tries to get mom's affection for himself.
24. When mother speaks firmly or raises her voice at him, child becomes upset, sorry, or ashamed about displeasing her.
25. Child is easy for mother to lose track of when he is playing out of her sight.
26. Child cries when mother leaves him at home with babysitter, father, or grandparent.
27. Child laughs when mother teases him.
28. Child enjoys relaxing in mother's lap.

29. At times, child attends so deeply to something that he doesn't seem to hear when people speak to him.
30. Child easily becomes angry with toys.
31. Child wants to be the center of mother's attention. If mom is busy or talking to someone, he interrupts.
32. When mother says "No" or punishes him, child stops misbehaving (at least at that time). Doesn't have to be told twice.
33. Child sometimes signals mother (or gives the impression) that he wants to be put down, and then fusses or wants to be picked right back up.
34. When child is upset about mother leaving him, he sits right where he is and cries. Doesn't go after her.
35. Child is independent with mother. Prefers to play on his own; leaves mother easily when he wants to play.
36. Child clearly shows a pattern of using mother as a base from which to explore.
37. Child is very active. Always moving around. Prefers active games to quiet ones.
38. Child is demanding and impatient with mother. Fussing and persists unless she does what he wants right away.
39. Child is often serious and businesslike when playing away from mother or alone with his toys.
40. Child examines new objects or toys in great detail. Tries to use them in different ways or to take them apart.
41. When mother says to follow her, child does so.
42. Child recognizes when mother is upset.
43. Child stays closer to mother or returns to her more often than the simple task of keeping track of her requires.
44. Child asks for and enjoys having mother hold, hug, and cuddle him.
45. Child enjoys dancing or singing along with music.
46. Child walks and runs around without bumping, dropping, or stumbling.
47. Child will accept and enjoy loud sounds or being bounced around in play, if mother smiles and shows that it is supposed to be fun.
48. Child readily lets new adults hold or share things he has, if they ask to.
49. Runs to mother with a shy smile when new people visit the home.
50. Child's initial reaction when people visit the home is to ignore or avoid them, even if he eventually warms up to them.
51. Child enjoys climbing all over visitors when he plays with them.
52. Child has trouble handling small objects or putting small things together.
53. Child puts his arms around mother or puts his hand on her shoulder when she picks him up.
54. Child acts like he expects mother to interfere with his activities when she is simply trying to help him something.
55. Child copies a number of behaviors or way of doing from watching mother's behavior.
56. Child becomes shy or loses interest when an activity looks like it might be difficult.
57. Child is fearless.
58. Child largely ignores adults who visit the home. Finds his own activities more interesting.

59. When child finishes with an activity or toy, he generally finds something else to do without returning to mother between activities.
60. If mother reassures him by saying "It's okay" or "It won't hurt you", child will approach or play with things that initially made him cautious or afraid.
61. Plays roughly with mother. Bumps, scratches, or bites during active play.
62. When child is in a happy mood, he is likely to stay that way all day.
63. Even before trying things himself, child tries to get someone to help him.
64. Child enjoys climbing all over mother when they play.
65. Child is easily upset when mother makes him change from one activity to another.
66. Child easily grows fond of adults who visit his home and are friendly to him.
67. When the family has visitors, child wants them to pay a lot of attention to him.
68. On the average, child is more active person than mother.
69. Rarely asks mother for help.
70. Child quickly greets his mother with a big smile when she enters the room.
71. If held in mother's arms, child stops cry and quickly recovers after being frightened or upset.
72. If visitors laugh at or approve of something the child does, he repeats it again and again.
73. Child has a cuddly toy or security blanket that he carries around, takes to bed, or holds when upset.
74. When mother doesn't do what child wants right away, he behaves as if mom were not going to do it at all.
75. At home, child gets upset or cries when mother walks out of the room.
76. When given a choice, child would rather play with toys than with adults.
77. When mother asks child to do something he readily understands what she wants.
78. Child enjoys being hugged or held by people other than his parents and/or grandparents.
79. Child easily becomes angry at mother.
80. Child uses mother's facial expressions as a good source of information when something looks risky or threatening.
81. Child cries as a way of getting mother to do what he wants.
82. Child spends most of his play time with just a few favorite toys or activities.
83. When child is bored, he goes to mother looking for something to do.
84. Child makes at least some effort to be clean and tidy around the house.
85. Child is strongly attracted to new activities and new toys.
86. Child tries to get mother to imitate him, and quickly notices and enjoys it when mom imitates him on her own.
87. If mother laughs at or approves of something the child has done, he repeats again and again.
88. When something upsets the child, he stays where he is and cries.
89. Child facial expressions are strong and clear when he is playing with something.
90. If mother moves very far, child follows along and continues his play in the area she has moved to.

Appendix I

Maternal Separation Anxiety Scale

Directions: The following statements represent matters of interest and concern to parents. Not all people feel the same way about them. Answer the statements as you are feeling now. Read each statement carefully and write the number to the left of the statement, on the line provided, which most reflects YOUR degree of agreement or disagreement. Try to answer all statements without skipping items or looking back. Answer all the items without discussing any of them with anyone.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

- ___ 1. I miss holding or cuddling my child when I am away from him/her.
- ___ 2. My child is happier with me than with babysitters or teachers.
- ___ 3. Children will be afraid in a new place without their mother.
- ___ 4. My life wouldn't be complete without a career.
- ___ 5. If a child is independent and outgoing, he/she will make friends easily without his/her mother's help.
- ___ 6. When away from my child, I often wonder if his/her physical needs (dry diapers, enough to eat, etc.) are being met.
- ___ 7. Holding and cuddling my child makes me feel so good that I really miss the physical closeness when I'm away.
- ___ 8. I am more concerned with my child's safety than a babysitter or teacher.
- ___ 9. It will be difficult for my child to adjust to someone else taking care of him/her.
- ___ 10. I would resent my job if it meant I had to be away from my child.
- ___ 11. My child will benefit from group experience (i.e., nursery school, day care, kindergarten) since they will provide him/her with social experiences that he/she could not get at home.
- ___ 12. When I am away from my child, I feel lonely and miss him/her a great deal.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

- ___13. Only a mother just naturally knows how to comfort her distressed child.
- ___14. A child is likely to get upset when he/she is left with a babysitter.
- ___15. I have a systematic plan for how I'm going to build my career in the world of work.
- ___16. It is good for my child to spend time away from me so that he/she can learn to deal independently with unfamiliar people and new situations.
- ___17. I like to have my child close to me at all times.
- ___18. I am naturally better at keeping my child safe than any other person.
- ___19. I believe that my child misses me when I have to let someone else take care of him/her for a while.
- ___20. A career or job brings me a lot of personal satisfaction.
- ___21. Even though my child fusses a bit when I leave, I know he/she will be OK in a few minutes--after I'm out of sight.
- ___22. I don't like to leave my child.
- ___23. My child prefers to be with me more than with anyone else.
- ___24. My child is afraid and sad when he/she is not with me.
- ___25. I would not regret postponing my career in order to stay home with my child.
- ___26. My child needs to spend time away from me in order to develop a sense of being an individual in his/her own right.
- ___27. When I'm separated from my child, I wonder whether he/she is crying and missing me.
- ___28. I don't enjoy myself when I'm away from my child.
- ___29. I worry that my child is never really comfortable in an unfamiliar setting if I'm not with him/her.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

- ___30. Children are very demanding and I often wish I had more time for a career.
- ___31. Exposure to many different people is good for my child.
- ___32. I worry when someone else cares for my child.
- ___33. If I could choose working full-time or staying home with my child, I would want to stay home.
- ___34. There are times in the lives of young children when they need to be with people other than their mothers.
- ___35. When away from my child, I worry about whether or not the babysitter is able to soothe and comfort my child if he/she is lonely or upset.

Appendix J

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number or times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:

- | | | | | | | | | | |
|-----|--|--------------|---|---|---|---|--|--|--|
| | 0. | never | | | | | | | |
| | 1. | almost never | | | | | | | |
| | 2. | sometimes | | | | | | | |
| | 3. | fairly often | | | | | | | |
| | 4. | very often | | | | | | | |
| 1. | In the last month, how often have you been upset because of something that happened unexpectedly? | 0 | 1 | 2 | 3 | 4 | | | |
| 2. | In the last month, how often have you felt that you were unable to control the important things in your life? | 0 | 1 | 2 | 3 | 4 | | | |
| 3. | In the last month, how often have you felt nervous and "stressed"? | 0 | 1 | 2 | 3 | 4 | | | |
| 4. | In the last month, how often have you felt that you dealt successfully with irritating life hassles? | 0 | 1 | 2 | 3 | 4 | | | |
| 5. | In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life? | 0 | 1 | 2 | 3 | 4 | | | |
| 6. | In the last month, how often have you felt confident about your ability to handle your personal problems? | 0 | 1 | 2 | 3 | 4 | | | |
| 7. | In the last month, how often have you felt that things were going your way? | 0 | 1 | 2 | 3 | 4 | | | |
| 8. | In the last month, how often have you found that you could not cope with all the things that you had to do? | 0 | 1 | 2 | 3 | 4 | | | |
| 9. | In the last month, how often have you been able to control irritations in your life? | 0 | 1 | 2 | 3 | 4 | | | |
| 10. | In the last month, how often have you felt that you were on top of things? | 0 | 1 | 2 | 3 | 4 | | | |
| 11. | In the last month, how often have you been angered because of things that happened that were outside of your control? | 0 | 1 | 2 | 3 | 4 | | | |

- 0. never
- 1. almost never
- 2. sometimes
- 3. fairly often
- 4. very often

- 12. In the last month, how often have found yourself thinking about things that you have to accomplish? 0 1 2 3 4
- 13. In the last month, how often have you been able to control the way you spend your time? 0 1 2 3 4
- 14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? 0 1 2 3 4

Appendix K

Career Salience Questionnaire

Please indicate how much you agree or disagree with each of the following statements by placing a check on the line under the appropriate category. Please try not to leave any statement out.

- (1) SD - Strongly Disagree
- (2) D - Disagree
- (3) U - Uncertain
- (4) A - Agree
- (5) SA - Strongly Agree

		SD	D	U	A	SA
1.	I intend to pursue the job of my choice even if it cuts deeply into the time I have for my family.	1	2	3	4	5
2.	It is more important to have some leisure time after work, and to enjoy some of the adventures of the mind (art, music, literature, etc.) than to have a job in your chosen field, be devoted to it, and be a success at it.	1	2	3	4	5
3.	If you work very hard on your job, you can't enjoy the better things in life.	1	2	3	4	5
4.	Work is one of the few areas in life where you can gain real satisfaction.	1	2	3	4	5
5.	I intend to pursue the job of my choice, even if it limits my personal freedom to enjoy life.	1	2	3	4	5
6.	To me, a job should be viewed primarily as a way of making money.	1	2	3	4	5
7.	I enjoy thinking about and making plans about my future career.	1	2	3	4	5
8.	It is difficult to find satisfaction in life unless you enjoy your job.	1	2	3	4	5
9.	Work is one of those necessary evils.	1	2	3	4	5
10.	Deciding on a career is just about the most important decision a person makes.	1	2	3	4	5
11.	I don't think too much about what type of job I'll be in ten years from now.	1	2	3	4	5
12.	I'm ready to make many sacrifices to get ahead in my job.	1	2	3	4	5

- (1) SD - Strongly Disagree (3) U - Uncertain
 (2) D - Disagree (4) A - Agree (5) SA - Strongly Agree

		SD	D	U	A	SA
13.	I look at a career as a means of expressing myself.	1	2	3	4	5
14.	I would consider myself extremely "career minded."	1	2	3	4	5
15.	I could never be truly happy in life unless I achieved success in my job of career.	1	2	3	4	5
16.	I intend to pursue the job of my choice even if it allows only very little opportunity to enjoy my friends.	1	2	3	4	5
17.	I want to be able to pretty much forget my job when I leave work in the evenings.	1	2	3	4	5
18.	I started thinking about jobs and careers when I was young.	1	2	3	4	5
19.	I intend to pursue the job of my choice, even if it leaves me little time for my religious activities.	1	2	3	4	5
20.	It is more important to have a job in your chosen field of interest, be devoted to it, and be a success at it than to have a family that is closely knit and that shares many experiences.	1	2	3	4	5
21.	The whole idea of working and holding a job is kind of distasteful to me.	1	2	3	4	5
22.	Planning for and succeeding in a career is my primary concern.	1	2	3	4	5
23.	I often find myself thinking about whether I will enjoy my chosen field.	1	2	3	4	5
24.	It is more important to be liked by your fellow men, devote your energies for the betterment of men, and be at least some help to someone than to have a job in your chosen field of interest, be a success at it.	1	2	3	4	5
25.	Planning for a specific career usually is not worth the effort; it doesn't matter too much what you do.	1	2	3	4	5
26.	I would move to another part of the country if I thought it would help advance my career.	1	2	3	4	5
27.	I never really thought about these types of questions very much.	1	2	3	4	5

28. Rank the following activities in terms of how much satisfaction you expect they will give you in your life. Rank them from 1 (most satisfaction) to 6 (least satisfaction).

_____ Family relationships
_____ Leisure time recreational activities
_____ Religious beliefs and activities
_____ Your career or occupation
_____ Participation as a citizen in affairs of your community
_____ Participation in activities directed toward the betterment of national or international affairs

Appendix L

Maternal Role Investment Scale*

Which of the following is *most* important to you? Which is *second most* important?

- a. _____ being married
- b. _____ being a mother
- c. _____ working

How would you have felt if you couldn't have children? Why?

Would you have adopted? Why or why not?

Have you always wanted to have children? Why or why not?

How important is it to you to be a mother? Why or why not?

How has being a mother changed your life?

How complete would your life be if you weren't a mother?

* The Maternal Role Investment Scale was administered during the interview.

Appendix M

Center for Epidemiologic Studies-Depression Scale

Circle the number for each statement which best describes how often you felt or behaved in this way during the past week.

Rarely or none of the time (1 day)	Some or a little of the time (1-2days)	Occasionally or a moderate amount of time (3-4 days)	Most of all of the time (5-7 days)	
0	1	2	3	
During the past week:				
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from family or friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life had been a failure.	0	1	2	3
10.I felt fearful.	0	1	2	3
11.My sleep was restless.	0	1	2	3
12.I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3
18. I felt sad.	0	1	2	3
19. I felt that people disliked me.	0	1	2	3
20. I could not "get going."	0	1	2	3

Appendix N

Self Analysis Form

Please circle the number for each statement that best describes how often you feel or behave this way.

	(Never)	1	2	3	4	5	(Always)
							Never Always
1. I am often nervous for no reason.		1	2	3	4	5	
2. I suffer from nervousness.		1	2	3	4	5	
3. I believe that I am no more nervous than most others.		1	2	3	4	5	
4. I would describe myself as a tense person.		1	2	3	4	5	
5. I must admit that I have at times been worried beyond reason over something that really did not matter.		1	2	3	4	5	
6. It makes me nervous to have to wait.		1	2	3	4	5	
7. I worry about terrible things that might happen.		1	2	3	4	5	
8. I often lose sleep over my worries.		1	2	3	4	5	
9. I am easily startled by things that happen unexpectedly.		1	2	3	4	5	
10. I often find myself worrying about something.		1	2	3	4	5	
11. I sometimes get myself into a state of tension and turmoil as I think of the day's events.		1	2	3	4	5	
12. There are days when I'm "on edge" all of the time.		1	2	3	4	5	
13. I am able to remain calm even though those around me worry.		1	2	3	4	5	
14. I am easily "rattled" at certain moments.		1	2	3	4	5	

Appendix O

Colorado Childhood Temperament Inventory

	Not at all like the child				A lot like the child
Child makes friends easily.	1	2	3	4	5
Child reacts intensely when upset.	1	2	3	4	5
Child persists at a task until successful.	1	2	3	4	5
If talked to, child stops crying.	1	2	3	4	5
Child makes faces at new foods.	1	2	3	4	5
Child is always on the go.	1	2	3	4	5
Child tends to be shy.	1	2	3	4	5
Plays with a single toy for long periods of time.	1	2	3	4	5
Child stopped fussing whenever someone talked to him or picked him up.	1	2	3	4	5
Child has strong likes and dislikes in food.	1	2	3	4	5
Child often fusses and cries.	1	2	3	4	5
When child moves about, he usually moves slowly.	1	2	3	4	5
Child is very sociable.	1	2	3	4	5
Child goes from toy to toy quickly.	1	2	3	4	5
Child tolerates frustration well.	1	2	3	4	5
Child tends to be somewhat emotional.	1	2	3	4	5
Rarely took a new food without fussing.	1	2	3	4	5
Child is off and running as soon as he wakes up in the morning.	1	2	3	4	5
Whenever child starts crying, he can be easily distracted.	1	2	3	4	5
Child is very friendly with strangers.	1	2	3	4	5
With a difficult toy, child gives up quite easily.	1	2	3	4	5
When upset by an unexpected situation, child calms down.	1	2	3	4	5
Child consistently dislikes many kinds of food.	1	2	3	4	5
Child cries easily.	1	2	3	4	5

Appendix P

Child Behavior Checklist (2/3)

Below is a list of items that describe children. For each item that describes the child now or within that past 2 months, please circle the 2 if the item is very true or often true of the child. Circle the 1 if the item is somewhat or sometimes true of the child. If the item is not true of the child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to the child.

0 = Not True (as far as you know)	1 = Somewhat or Sometimes True			2 = Very True or Often True			
1. Aches or pains (without medical cause)	0	1	2	33. Feelings are easily hurt	0	1	2
2. Acts too young for age	0	1	2	34. Gets hurt a lot, accident prone	0	1	2
3. Afraid to try new things	0	1	2	35. Gets in many fights	0	1	2
4. Avoids looking others in the eye	0	1	2	36. Gets into everything	0	1	2
5. Can't concentrate, can't pay attention for long	0	1	2	37. Gets too upset when separated from parents	0	1	2
6. Can't sit still or restless	0	1	2	38. Has trouble getting to sleep	0	1	2
7. Can't stand having things out of place	0	1	2	39. Headaches (without medical cause)	0	1	2
8. Can't stand waiting; wants everything now	0	1	2	40. Hits others	0	1	2
9. Chews on things that aren't edible	0	1	2	41. Holds his/her breath	0	1	2
10. Clings to adults or too dependent	0	1	2	42. Hurts animals or people without meaning to	0	1	2
11. Constantly seeks help	0	1	2	43. Looks unhappy without good reason	0	1	2
12. Constipated, doesn't move bowels	0	1	2	44. Angry moods	0	1	2
13. Cries a lot	0	1	2	45. Nausea, feels sick (without medical cause)	0	1	2
14. Cruel to animals	0	1	2	46. Nervous movements or twitching	0	1	2
15. Defiant	0	1	2	47. Nervous, highstrung, or tense	0	1	2
16. Demands must be met immediately	0	1	2	48. Nightmares	0	1	2
17. Destroys his/her own things	0	1	2	49. Overeating	0	1	2
18. Destroys things belonging to his/her family or other children	0	1	2	50. Overtired	0	1	2
19. Diarrhea or loose bowels when not sick	0	1	2	51. Overweight	0	1	2
20. Disobedient	0	1	2	52. Painful bowel movements	0	1	2
21. Disturbed by any change in routine	0	1	2	53. Physically attacks people	0	1	2
22. Doesn't want to sleep alone	0	1	2	54. Picks nose, skin, or other parts of body	0	1	2
23. Doesn't answer when people talk to his/her	0	1	2	55. Plays with own sex parts too much	0	1	2
24. Doesn't eat well	0	1	2	56. Poorly coordinated or clumsy	0	1	2
25. Doesn't get along with other children	0	1	2	57. Problems with eyes	0	1	2
26. Doesn't know how to have fun, acts like a little adult	0	1	2	58. Punishment doesn't change his/her behavior	0	1	2
27. Doesn't seem to feel guilty after misbehaving	0	1	2	59. Quickly shifts from one activity to another	0	1	2
28. Doesn't want to go out of home	0	1	2	60. Rashes or other skin problems	0	1	2
29. Easily frustrated	0	1	2	61. Refuses to eat	0	1	2
30. Easily jealous	0	1	2	62. Refuses to play active games	0	1	2
31. Eats or drinks things that are not food	0	1	2	63. Repeatedly rocks head or body	0	1	2
32. Fears certain animals, situations, or places	0	1	2	64. Resists going to bed at night	0	1	2
				65. Resists toilet training	0	1	2
				66. Screams a lot	0	1	2

67. Seems unresponsive to affection	0	1	2	81. Stubborn, sullen, or irritable	0	1	2
68. Self-conscious or easily embarrassed	0	1	2	82. Sudden changes in mood or feelings	0	1	2
69. Selfish or won't	0	1	2	83. Sulks a lot	0	1	2
70. Shows little affection toward people	0	1	2	84. Talks or cries out in sleep	0	1	2
71. Shows little interest in things around him/her	0	1	2	85. Temper Tantrums or hot temper	0	1	2
72. Shows too little fear of getting hurt	0	1	2	86. Too concerned with neatness or cleanliness	0	1	2
73. Too shy or timid	0	1	2	87. Too fearful or anxious	0	1	2
74. Sleeps less than most children during the day and/or night	0	1	2	88. Uncooperative	0	1	2
75. Smears or plays with bowel movements	0	1	2	89. Underactive, slow moving, or lacks energy	0	1	2
76. Speech problems	0	1	2	90. Unhappy, sad, or depressed	0	1	2
77. Stares into space or seems preoccupied	0	1	2	91. Unusually loud	0	1	2
78. Stomachaches or cramps (without medical cause)	0	1	2	92. Upset by new people or situations	0	1	2
79. Stores up many things he/she doesn't need	0	1	2	93. Vomiting, throwing up	0	1	2
80. Strange behavior	0	1	2	94. Wakes up often at night	0	1	2
				95. Wanders away from home	0	1	2
				96. Wants a lot of attention	0	1	2
				97. Whining	0	1	2
				98. Withdrawn, doesn't get involved	0	1	2
				99. Worries	0	1	2

Appendix Q

Child Behavior Checklist (4-16)

Below is a list of items that describe children and youth. For each item that describes your child now or within the past 7 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know)

1 = Somewhat or Sometimes True

2 = Very True or Often True

- | | | | | | | | |
|---|---|---|---|--|---|---|---|
| 1. Acts too young for his/her age | 0 | 1 | 2 | 39. Hangs around with others who get in trouble | 0 | 1 | 2 |
| 2. Allergy | 0 | 1 | 2 | 40. Hears sounds or voices that aren't there | 0 | 1 | 2 |
| 3. Argues a lot | 0 | 1 | 2 | 41. Impulsive or acts without thinking | 0 | 1 | 2 |
| 4. Asthma | 0 | 1 | 2 | 42. Would rather be alone than with others | 0 | 1 | 2 |
| 5. Behaves like opposite sex | 0 | 1 | 2 | 43. Lying or cheating | 0 | 1 | 2 |
| 6. Bowel movements outside toilet | 0 | 1 | 2 | 44. Bites fingernails | 0 | 1 | 2 |
| 7. Bragging, | 0 | 1 | 2 | 45. Nervous, highstrung, or tense | 0 | 1 | 2 |
| 8. Can't concentrate, can't pay attention for long | 0 | 1 | 2 | 46. Nervous movements or twitching | 0 | 1 | 2 |
| 9. Can't get his/her mind off certain thoughts; obsessions | 0 | 1 | 2 | 47. Nightmares | 0 | 1 | 2 |
| 10. Can't sit still, restless, or hyperactive | 0 | 1 | 2 | 48. Not like by other kids | 0 | 1 | 2 |
| 11. Clings to adults or too dependent | 0 | 1 | 2 | 49. Constipated, doesn't move bowels | 0 | 1 | 2 |
| 12. Complains of | 0 | 1 | 2 | 50. Too fearful or anxious | 0 | 1 | 2 |
| 13. Confused or seems to be in a fog | 0 | 1 | 2 | 51. Feels dizzy | 0 | 1 | 2 |
| 14. Cries a | 0 | 1 | 2 | 52. Feels too guilty | 0 | 1 | 2 |
| 15. Cruel to animals | 0 | 1 | 2 | 53. Overeating | 0 | 1 | 2 |
| 16. Cruelty, bullying, or meanness to others | 0 | 1 | 2 | 54. Overtired | 0 | 1 | 2 |
| 17. Day-dreams or gets lost in his/her thoughts | 0 | 1 | 2 | 55. Overweight | 0 | 1 | 2 |
| 18. Deliberately harms self or attempts suicide | 0 | 1 | 2 | 56. Physical problems without known medical cause: | | | |
| 19. Demands a lot of attention | 0 | 1 | 2 | a. Aches or pains (not stomach or headaches) | 0 | 1 | 2 |
| 20. Destroys his/her own things | 0 | 1 | 2 | b. Headaches | 0 | 1 | 2 |
| 21. Destroys things belonging to his/her family or others | 0 | 1 | 2 | c. Nausea, feels sick | 0 | 1 | 2 |
| 22. Disobedient at | 0 | 1 | 2 | d. Problems with eyes (not corrected by glasses) | 0 | 1 | 2 |
| 23. Disobedient at school | 0 | 1 | 2 | e. Rashes or other skin problems | 0 | 1 | 2 |
| 24. Doesn't eat | 0 | 1 | 2 | f. Stomachaches or cramps | 0 | 1 | 2 |
| 25. Doesn't get along with other kids | 0 | 1 | 2 | g. Vomiting, throwing up | 0 | 1 | 2 |
| 26. Doesn't seem to feel guilty after misbehaving | 0 | 1 | 2 | h. Other | 0 | 1 | 2 |
| 27. Easily jealous | 0 | 1 | 2 | 57. Physically attacks people | 0 | 1 | 2 |
| 28. Eats or drinks things that are not food | 0 | 1 | 2 | 58. Picks nose, skin, or other parts of body | 0 | 1 | 2 |
| 29. Fears certain animals, situations, or places, other than school | 0 | 1 | 2 | 59. Plays with own sex parts in public | 0 | 1 | 2 |
| 30. Fears going to | 0 | 1 | 2 | 60. Plays with own sex parts too much | 0 | 1 | 2 |
| 31. Fears he/she might think or do something bad | 0 | 1 | 2 | 61. Poor school work | 0 | 1 | 2 |
| 32. Feels he/she has to be perfect | 0 | 1 | 2 | 62. Poorly coordinated or clumsy | 0 | 1 | 2 |
| 33. Feels or complains that no one loves him/her | 0 | 1 | 2 | 63. Prefers being with older kids | 0 | 1 | 2 |
| 34. Feels others are out to get him/her | 0 | 1 | 2 | 64. Prefers being with younger kids | 0 | 1 | 2 |
| 35. Feels worthless or inferior | 0 | 1 | 2 | 65. Refuses to talk | 0 | 1 | 2 |
| 36. Gets hurt a lot, accident-prone | 0 | 1 | 2 | 66. Repeats certain acts over and over compulsions | 0 | 1 | 2 |
| 37. Gets in many | 0 | 1 | 2 | 67. Runs away from home | 0 | 1 | 2 |
| 38. Gets teased a lot | 0 | 1 | 2 | 68. Screams a lot | 0 | 1 | 2 |
| | | | | 69. Secretive, keeps things to self | 0 | 1 | 2 |
| | | | | 70. Sees things that aren't there | 0 | 1 | 2 |

71. Self-conscious or easily embarrassed	0	1	2	100. Trouble sleeping	0	1	2
72. Sets fires	0	1	2	101. Truancy, skips school	0	1	2
73. Sexual problems	0	1	2	102. Underactive, slow moving,	0	1	2
74. Showing off or clowning	0	1	2	or lacks energy	0	1	2
75. Shy or timid	0	1	2	103. Unhappy, sad, or depressed	0	1	2
76. Sleeps less than most kids	0	1	2	104. Unusually loud	0	1	2
77. Sleeps more than most kids during day	0	1	2	105. Uses alcohol or drugs for	0	1	2
and/or night				nonmedical purposes	0	1	2
78. Smears or plays with bowel movements	0	1	2	106. Vandalism	0	1	2
79. Speech problem	0	1	2	107. Wets self during the day	0	1	2
80. Stares blankly	0	1	2	108. Wets the bed	0	1	2
81. Steals at home	0	1	2	109. Whining	0	1	2
82. Steals outside the home	0	1	2	110. Wishes to be of opposite sex	0	1	2
83. Stores up things he/she doesn't need	0	1	2	111. Withdrawn, doesn't get involved	0	1	2
84. Strange behavior	0	1	2	with others			
85. Strange ideas	0	1	2	112. Worries	0	1	2
86. Stubborn, sullen, or irritable	0	1	2	113. Please write in any problems your	0	1	2
87. Sudden changes in mood or feelings	0	1	2	child has that were not listed above			
88. Sulks a lot	0	1	2				
89. Suspicious	0	1	2				
90. Searing or obscene language	0	1	2				
91. Talks about killing self	0	1	2				
92. Talks or walks in sleep	0	1	2				
93. Talks too much	0	1	2				
94. Teases a lot	0	1	2				
95. Temper tantrums or hot temper	0	1	2				
96. Thinks about sex too much	0	1	2				
97. Threatens people	0	1	2				
98. Thumb-sucking	0	1	2				
99. Too concerned with neatness or cleanliness	0	1	2				

Appendix R

Background Questionnaire (Final Interview)

1. How long have you been in the Navy? _____ years _____ months
2. How long have you been assigned to the present command? _____ years _____ months
3. Have you ever been assigned to a ship/sea duty? _____
4. If yes, what type of command? _____
5. How long were you assigned? _____ years _____ months
6. What is your age? _____
7. What is your race/ethnicity?
 - a. African-American
 - b. Mexican/Hispanic American
 - c. White, non-Hispanic
 - d. Pacific Islander
 - e. American Indian
 - f. other (please specify) _____
8. What is the highest level of education that you have achieved?
 - a. some high school, but no degree
 - b. home schooling certificate
 - c. GED
 - d. high school degree
 - e. vo-tech associate degree
 - f. some college
 - g. college degree (B.A., B.S.)
 - h. some Master's courses
 - i. Master's degree
9. What is your marital status?
 - a. single, never married
 - b. divorced
 - c. married
 - d. living together
 - e. widowed
 - f. separated
10. If married/living together, how long have you been together? _____

11. How many times have you been married? _____

12. What is your rating? _____
(please be specific)

13. Please circle your paygrade
- a. E1
 - b. E2
 - c. E3
 - d. E4
 - e. E5
 - f. E6
 - g. E7
 - h. E8
 - i. E9

14. Please list the sex and age of your children. Please put a * by any children who do not usually live with you. Please put an S by all step-children.

Child's Sex	Child's Birth Date
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

15. Have you ever attended deployment programs offered by Navy Family Services? ____ YES ____ NO

16. Please indicate the number of times that you have attended each of the following programs:

	For current deployment	Number of times for prior deployments
Couples Predeployment	_____	_____
Parent-Child Predeployment	_____	_____
Reunion	_____	_____

17. Please provide us with your total family's net yearly income. _____

If SINGLE, please go to Question 30.

18. What is your husband's (ex-husband's) age? _____

19. What is your husband's (ex-husband's) ethnicity? a. African-American
b. Mexican/Hispanic American
c. White, non-Hispanic
d. Pacific Islander
e. American Indian
f. other (please specify) _____

20. What is the highest level of education that your husband (ex-husband) has achieved?
a. some high school, but no degree
b. home schooling certificate
c. GED
d. high school degree
e. vo-tech associate degree
f. some college
g. college degree (B.A., B.S.)
h. some Master's courses
i. Master's degree (M.Ed., M.B.A.)
j. Ph.D., M.D., J.D.

21. What is your husband's (ex-husband's) occupation, rating, or officer occupation?
_____(please be specific)

22. Please provide us with your total family's net yearly income. _____

If your husband/ex-husband is *NOT* in the Navy, please skip to QUESTION 30.

23. How long has your husband/ex-husband been in the Navy? _____

24. How many long-term deployments (3 months or more) has he experienced previously? _____

25. Has he experienced any long-term deployments (3 months or more) in the last year? _____

26. How long has your husband/ex-husband been away from your child (in the study) since he/she was born because of work separations/deployments? _____ months _____ weeks _____ days

27. When was his last separation from your child (participating in the study)? _____ date

28. How long did his last separation from the child (participating in the study) last? _____ months _____ weeks _____ days

29. Please circle your husband's/ex-husband's paygrade.
- | | |
|-------|-------|
| a. E1 | j. O1 |
| b. E2 | k. O2 |
| c. E3 | l. O3 |
| d. E4 | m. O4 |
| e. E5 | n. O5 |
| f. E6 | |
| g. E7 | |
| h. E8 | |
| i. E9 | |

30. So that we can contact your child's daycare teacher/home-care provider/babysitter, please list your child care provider's name, mailing address, and phone number.

(name)

(address)

(phone number)

Appendix S

Coding for Semi-Structured Maternal Interviews (Deployment Subjects = Time 1)

Who typically cares for "child's name" while you are at work?

- 1a. a=01
- b=02
- c=03
- d=04
- e=05
- f=06
- g=07
- h=08
- i=09
- j=10

*Note the final number must always be 2 digits.

How comfortable are you with the quality of the care your child receives while you are at work?

- 1b. Number from 1 - 7

How many different full-time babysitters/daycare teachers has "child's name" had in the last year?

- 1c. Number from 0 - 9

How long has the child been with his or her current babysitter/daycare teacher?

- 1d. Convert into months (e.g., 1 year = 12 months; 2 weeks or less = 0--Range = 00 to 60)

*Note the final score must always be 2 digits.

Do you ever feel guilty about leaving "child's name" to go to work?

- 1e. 1=yes 2 = no

How much guilt do you feel about leaving "child's name" to go to work?

- 1f. Number from 1 - 7

Overall, how difficult has child care been?

- 1g. Number from 1 - 7

Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements?

- 1h. Number of days from 000 to 365

*Note the number must always be 3 digits.

Do you have any comments, concerns, or suggestions about child care?

- 1i. 1 = Flexible hours (e.g., more night hours; more morning hours)
2 = cost (high/expensive)
3 = concerns about provider (e.g., love them like mother does; at-home care providers need to be monitored/quality for price)
4 = environmental concerns (e.g., food, no. of other children, are they getting enough attention)
5 = availability of child care (e.g., hard to find)
6 = waiting list for Navy child care
7 = no
8 = positive comments
9 = cost is low
10 = mothers should stay home with child as long as possible
11 = distance from work

*Note the participant could have more than one code.

* Must always have 2 numbers (e.g., 01)

Who will be your child's primary caregiver during your upcoming deployment?

- 2a. a = 1
b = 2
c = 3
d = 4
e = 5
f = 6
g = 7
h = 8
I = 9
j = 10

How comfortable are you with the quality of the care your child will receive from ("child's primary caregiver") while you are on deployment?

2b. Number from 1 - 7

Do you ever feel guilty about leaving "child's name" to go on deployment?

- 2c. 1 = yes
2 = no

How much guilt do you feel about leaving "child's name" to go on deployment?

2d. Number from 1 - 7

Overall, how difficult has getting someone to care for "child's name" during deployment been?

2e. Number from 1 - 7

3. *What effect do you think long-term deployment will have on your immediate family?*

Child

- 1 = No effect on child
- 2 = Child closer to father
- 3 = Child Obedience
- 4 = Child Independence
- 5 = Child Care Differences
- 6 = Emotional Adjustment/Difficulty

Mother Herself

- 11 = Attachment to child
- 12 = Emotionally Hard/Diff. on Mother
- 13 = Separation Stressful for Mother
- 14 = Loss of Mothering Role

Husband/Boyfriend

- 21. Caretaking Responsibilities
- 22. Stressful on Him
- 23. Emotional Adjustment/Difficulty

Other Family Members

- 31. Difficult on grandparents (amount of work, etc.

Immediate Family

- 41. Stress
- 42. Emotional Adjustments/Emotional Difficulty
- 43. Practical/Domestic Adjustment/Problems
- 44. Scheduling/Routine Disrupted

Marriage

- 51. Marital Communication Difficulties

When you joined the Navy, at what point did you expect to get assigned to sea duty?

- 4a. a = 1
- b = 2
- c = 3
- d = 4 (never)

How many long-term deployments (3 months or more) have you experienced previously?

- 4b. Number from 0 - 9

Have you experienced any long-term deployments (3 months or more) in the last year?

- 4c. 1 = yes, 2 = no

If yes, how many?

- 4c(2). Number from 1 - 3

How much total time have you been away from your child (in the study) in the last year because of work separations/deployments?

- 4d. Time away in last year
- Number from 000 (0 days away in last year) to 365 (never home in last year)

*Note the final number must always be 3 digits.

When was the last time you were away from your child because of work?

- 4e. Last time away -- work backwards from the date of interview (e.g., Date of Interview was 11/15/96 and Last Time Away was 9/15/96 = 2 months --then convert into the number of days (e.g., 2 months = 060)

*Note the final number must be always be 3 digits.

How long were you away from your child the last time?

- 4f. Length of time away -- Convert the number into days (e.g., 1 month = 030 days)

*Note the final number must always be 3 digits.

Did your immediate family experience any difficulties/strains as a result of these work-related separations/deployments in the last year?

- 4g. Strains/Difficulties

1 = a = child care differences between sitter/father and mother

2 = b = child behavior/health/mental health

3 = c = maternal fears about child's response to mother (e.g., concerns about how the child will respond to mother or whether the child will remember the mother)

4 = d = actual mother/child attachment issues

5 = e = mother concerned about/jealous about babysitter's relationship with child

6 = f = strains on marriage/romantic relationship

7 = g = difficult for grandparents

8 = h = no

9 = i = hard to find care during TDY

10 = j = difficult on husband

11 = k = (yes-- no specific explanation)

*Note the participant could have more than one code.

Has your child's doctor mentioned that "child's name" has any health problems (e.g., for example asthma/tonsillitis)?

- 5a. 1 = yes 2 = no

What health problems has "child's name's" doctor mentioned?

- 5b. 1 = asthma/breathing problems/disease

2 = ear infections

3 = colds/flu/viruses

4 = weight

5 = allergies

6 = no

7 = eye problems

8 = developmental disability

9 = internal problems

10 = developmental problems

* Note the child could have more than one code.

As compared to the past year, have you noticed any sudden changes in "child's name" health in the past month?

5c. 1 = yes, 2 = no

What sudden changes have you noticed in "child's name" health in the past month?

- 5d. 1 = asthma/breathing problems/disease
2 = ear infections
3 = colds/flu/viruses
4 = sleeping problems
5 = diarrhea
6 = allergies
7 = no
8 = eating problems

*Note the child could have more than one code.

During the past month, has "child's name" babysitter/teacher mentioned any changes in "child's name's" behavior or disposition--how difficult/fussy/happy he or she has been?

6a. 1 = yes, 2 = no

What changes has your child's babysitter/teacher noticed in "child's name" during the past month?

- 6b. 1 = temper tantrums
2 = negative behavior (e.g., talks back, grabs toys)
3 = positive personality changes/child independence/not relying on mother as much
4 = positive relationship with babysitter
5 = prosocial behavior (sharing, helping)
6 = no
7 = aggressive behavior (e.g., hitting, biting, kicking)
8 = eating problems
9 = regressive behavior

*Note the child could have more than one code.

Have you noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficult/fussy/happy he/she has been during the past month?

7a. 1 = yes 2 = no

What changes in "child's name" have you noticed in the past month?

- 7b. 1 = temper tantrums
2 = negative behavior/acting out (e.g., talking back, feisty)
3 = positive personality changes/child independence/not relying on mother as much
4 = positive relationship with babysitter
5 = prosocial behavior (sharing, helping)
6 = regressive behavior (e.g., clinging, bedwetting again, etc.)
7 = child having problems with mother's boyfriend

- 8 = separation from Navy father difficult (due to father's deployment)
- 9 = no
- 10 = aggressive behavior (e.g., hitting, biting)
- 11 = changes in eating
- 12 = changes in sleeping

*Note the child could have more than one code.

8a.-8g. Maternal Role Investment (Code as before--mother receives a number from 1 to 9 that reflects the degree to which she is invested in the maternal role).

In your opinion what is the best age for a woman to have her first child?

8h. Two-digit number

8i. In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?

- a = 1
- b = 2
- c = 3
- d = 4
- e = 5
- f = 6 (petty officer and on shore duty)

How satisfied are you with the emotional support you receive from "child's name's" father?

9a. Number from 1 - 7

How satisfied are you with the emotional support you receive from family members other than "child's name's" father?

9b. Number from 1 - 7

How satisfied are you with the emotional support you receive from just friends?

9c. Number from 1 - 7

How satisfied are you with the practical support you receive from "child's name's" father?

9d. Number from 1 - 7

How satisfied are you with the practical support you receive from family members other than "child's name's" father?

9e. Number from 1 - 7

How satisfied are you with the practical support you receive from just friends?

9f. Number from 1 - 7

For single/divorced mothers only.

Please rate the quality of your relationship with "child's name's" father.

10. For Married/Widow -- should be missing
For Single/Divorced Number from 1 - 7

How much contact has "child's name" had with his or her father?

11. For Married or Widowed moms this information should be missing.
For Single/Divorced: a = 1
b = 2
c = 3
d = 4
e = 5
f = 6
g = 7
h = 8 ONLY ONCE or TWICE since the child was born
(notice that this does not appear on interview)

How likely will you be to reenlist at your EAOS?

12. Number from 1 - 7

Why do you plan to leave (response of 1-3)/stay in(response of 5-7) the Navy? If respondent answers "4," why are you unsure about staying in the Navy?

13. 1 = Benefits
2 = Job Security/Steady Pay
3 = Career
4 = Retirement
5 = Travel
6 = Satisfied/Happy with Navy
7 = Sea Duty Coming Up
8 = Demands of Being a Mother and Being in the Navy too difficult
9 = Want to be a "Full-time Mom"
10 = Bad Work Environment (e.g., C.O./boss is a problem)
11 = Field is Closed (e.g., wants to go into nursing but no "slots" are available)
12 = Getting out to go to school
13 = Staying in to go to school
14 = Don't like Navy/Dissatisfied with Navy
15 = Depends on orders
16 = Hard on family
17 = Hard on marriage
18 = Good housing
19 = training
20 = change career
21 = bad pay

22 = keeps respondent off welfare
23 = being separated from the Navy
24 = mother wants more flexible hours

*Note the participant could have more than one code.

Please rate your overall Navy experience up to this point in your career.

14. Number from 1 - 7

Appendix T

Coding for Semi-Structured Maternal Interviews (Control Subjects = Time 1)

Who typically cares for "child's name" while you are at work?

- 1a. a=01
 b=02
 c=03
 d=04
 e=05
 f=06
 g=07
 h=08
 i=09
 j=10

*Note the final number must always be 2 digits.

How comfortable are you with the quality of the care your child receives while you are at work?

- 1b. Number from 1 - 7

How many different full-time babysitters/daycare teachers has "child's name" had in the last year?

- 1c. Number from 0 - 9

How long has "child's name" been with his or her current babysitter/daycare teacher?

- 1c(2). Convert into months (e.g., 1 year = 12 months; 2 weeks or less = 0--Range = 00 to 60)

*Note the final score must always be 2 digits.

Do you ever feel guilty about leaving "child's name" to go to work?

- 1d. 1=yes 2 = no

How much guilt do you feel about leaving "child's name" to go to work?

- 1e. Number from 1 - 7

Overall, how difficult has child care been?

- 1f. Number from 1 - 7

Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements?

- 1g. Number of days from 000 to 365

*Note the number must always be 3 digits.

Do you have any comments/concerns, or suggestions about child care?

- 1h. 1 = Flexible hours (e.g., more night hours; more morning hours)
2 = cost (high/expensive)
3 = concerns about provider (e.g., love them like mother does; at-home care providers need to be monitored/quality for price)
4 = environmental concerns (e.g., food, no. of other children, are they getting enough attention)
5 = availability of child care (e.g., hard to find)
6 = waiting list for Navy child care
7 = no
8 = positive comments
9 = cost is low
10 = mothers should stay home with child as long as possible
11 = distance from work

*Note the participant could have more than one code.

* Must always have 2 numbers (e.g., 01)

When you joined the Navy, at what point did you expect to get assigned to sea duty?

- 2a. a = 1
b = 2
c = 3
d = 4 (never)

How many long-term deployments (3 months or more) have you experienced previously?

- 2b. Number from 0 - 9

Have you experienced any long-term deployments (3 months or more) in the last year?

- 2c. 1 = yes, 2 = no

If yes, how many?

- 2c(2). Number from 1 - 3

How much total time have you been away from your child (in the study) in the last year because of work separations/deployments?

- 2d. Time away in last year
Number from 000 (0 days away in last year) to 365 (never home in last year)

*Note the final number must always be 3 digits.

When was the last time you were away from your child (in the study) in the last year because of work?

- 2e. Last time away -- work backwards from the date of interview (e.g., Date of Interview was 11/15/96 and Last Time Away was 9/15/96 = 2 months --then convert into the number of days (e.g., 2 months = 060)

*Note the final number must always be 3 digits.

How long were you away from your child the last time?

- 2f. Length of time away -- Convert the number into days (e.g., 1 month = 030 days)

*Note the final number must always be 3 digits.

Did your immediate family experience any difficulties/strains as a result of these work-related separations/deployments in the last year?

- 2g. Strains/Difficulties

1 = a = child care differences between sitter/father and mother

2 = b = child behavior/health/mental health

3 = c = maternal fears about child's response to mother (e.g., concerns about how the child will respond to mother or whether the child will remember the mother)

4 = d = actual mother/child attachment issues

5 = e = mother concerned about/jealous about babysitter's relationship with child

6 = f = strains on marriage/romantic relationship

7 = g = difficult for grandparents

8 = h = no

9 = i = hard to find care during TDY

10 = j = difficult on husband

11 = k = (yes--no specific explanation)

*Note the participant could have more than one code.

Has your child's doctor mentioned that "child's name" has any health problems (e.g., for example asthma/tonsillitis)?

- 3a. 1 = yes 2 = no

What health problems has "child's name's" doctor mentioned?

- 3b. 1 = asthma/breathing problems/disease

2 = ear infections

3 = colds/flu/viruses

4 = weight

5 = allergies

6 = no

7 = eye problems

8 = developmental disability

9 = internal problems

10 = developmental problems

* Note the child could have more than one code.

As compared to the past year, have you noticed any sudden changes in "child's name's" health in the past month?

3c. 1 = yes 2 = no

What sudden changes have you noticed in "child's name's" health in the past month?

3d. 1 = asthma/breathing problems/disease

2 = ear infections

3 = colds/flu/viruses

4 = sleeping problems

5 = diarrhea

6 = allergies

7 = no

8 = eating problems

*Note the child could have more than one code.

During the past month, has your child's babysitter/teacher mentioned any changes in "child's name's" behavior or disposition--how difficult/fussy/happy he or she has been?

4a. 1 = yes 2 = no

What changes has your child's babysitter/teacher noticed in "child's name" during the past month?

4b. 1 = temper tantrums

2 = negative behavior (e.g., talks back, grabs toys)

3 = positive personality changes/child independence/not relying on mother as much

4 = positive relationship with babysitter

5 = prosocial behavior (sharing, helping)

6 = no

7 = aggressive behavior (e.g., hitting, biting, kicking)

8 = eating problems

9 = regressive behavior

*Note the child could have more than one code.

Have you noticed any changes in "child's name" behavior or temperament--his/her disposition--how difficult/fussy/happy he/she has been during the past month?

5a. 1 = yes, 2 = no

What changes in "child's name" have you noticed in the past month?

5b. 1 = temper tantrums

2 = negative behavior/acting out (e.g., talking back, feisty)

3 = positive personality changes/child independence/not relying on mother as much

4 = positive relationship with babysitter

5 = prosocial behavior (sharing, helping)

6 = regressive behavior (e.g., clinging, bedwetting again, etc.)

7 = child having problems with mother's boyfriend

- 8 = separation from Navy father difficult (due to father's deployment)
- 9 = no
- 10 = aggressive behavior (e.g., hitting, biting)
- 11 = changes in eating
- 12 = changes in sleeping

*Note the child could have more than one code.

6a. - 6g. Maternal Role Investment Scale --code per MRIS instructions

6h. *In your opinion what is the best age for a woman to have her first child?*

Two-digit number

6i. *In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?*

- a = 1
- b = 2
- c = 3
- d = 4
- e = 5
- f = 6 (shore duty and Petty Officer)

How satisfied are you with the emotional support you receive from "child's name's" father?

7a. Number from 1 - 7

How satisfied are you with the emotional support you receive from family members other than "child's name's" father?

7b. Number from 1 - 7

How satisfied are you with the emotional support you receive from just friends?

7c. Number from 1 - 7

How satisfied are you with the practical support you receive from "child's name's" father?

7d. Number from 1 - 7

How satisfied are you with the practical support you receive from family members other than "child's name's" father?

7e. Number from 1 - 7

How satisfied are you with the practical support you receive from just friends?

7f. Number from 1 - 7

For Single/Divorced Women Only

Please rate the quality of your relationship with "child's name's" father.

8. Number from 1 - 7

How much contact has "child's name" had with his or her father?

9. For Married or Widowed moms this information should be missing.

For Single/Divorced: a = 1

b = 2

c = 3

d = 4

e = 5

f = 6

g = 7

h = 8. ~~ONLY ONCE or TWICE~~ since the child was born
(notice that this does not appear on interview)

How likely will you be to reenlist at your EAOS?

10. Number from 1 - 7

Why do you plan to leave (response of 1-3)/stay in (response of 5-7) the Navy? If respondent answers "4", why are you unsure about staying in the Navy?

11. 1 = Benefits

2 = Job Security/Steady Pay

3 = Career

4 = Retirement

5 = Travel

6 = Satisfied/Happy with Navy

7 = Sea Duty Coming Up

8 = Demands of Being a Mother and Being in the Navy too difficult

9 = Want to be a "Full-time Mom"

10 = Bad Work Environment (e.g., C.O./boss is a problem)

11 = Field is Closed (e.g., wants to go into nursing but no "slots" are available)

12 = Getting out to go to school

13 = Staying in to go to school

14 = Don't like Navy/Dissatisfied with Navy

15 = Depends on orders

16 = Hard on family

17 = Hard on marriage

18 = Good housing

19 = Training

20 = Change career

21 = Gad pay

22 = Keeps respondent off welfare

23 = Being separated from the Navy

24 = Mother wants more flexible hours

*Note the participant could have more than one code.

Please rate your overall Navy experience up to this point in your career.

12. Number from 1 - 7

Appendix U

Coding for Pregnancy Questions

1. *Again, we've heard that sometimes Navy women get pregnant to avoid sea duty. What is your opinion about this?*

- 1 = yes, this happens
- 2 = no, this does not happen

(Her opinion regarding ship-board pregnancy)

- 1b. 1 = Stereotypes the rest of us
- 2 = Career-oriented women wouldn't do this
- 3 = Adds additional strain and stress to the women who are left
- 4 = Not fair to child/selfish/immature of mother/bad idea
- 5 = Men do similar things to avoid ship duty (Malingering/Injure Self)
- 6 = Woman must return to ship duty
- 7 = Not as frequent as people think it is
- 8 = It's okay
- 9 = Happens all the time/a lot
- 10 = Makes it harder on women who just want to get pregnant (but not to avoid sea duty)
- 11 = Lower ranking/younger women do this
- 12 = Shore women get pregnant to avoid ship assignment
- 13 = Navy treats pregnant women as cripples
- 14 = No comment
- 15 = Some women get pregnant to avoid physical test (i.e., body fat, etc.)

2. *Do you know anyone personally who has gotten pregnant to avoid sea duty?*

- 2a. 1 = yes 2 = No

If yes, what happened exactly?

(How well does respondent know the woman who got pregnant in order to avoid sea duty?)

- 2b. 1 = First-hand (she personally knows the woman or the woman's husband)
- 2 = Second-hand/Hearsay/Someone implied that she did this
- 3 = Participant thinks individual got pregnant intentionally
- 4 = Respondent knows more than 1 person first-hand (or the women's husbands)

3. *If the mother has been on ship duty now or at some point in her career, ask "Have you ever gotten pregnant to get off sea duty?"*

3a. 1 = Yes

2 = No

3 = subject got pregnant on sea duty but not to avoid sea duty

If yes, what happened exactly?

*At this point in data collection, no respondents have replied that they intentionally got pregnant to avoid ship duty.

Appendix V

Coding for Midterm Interview (Interview is Conducted at Mid-Point with Child's Primary Caregiver during the Mother's Deployment)

Is babysitter the same? 1 = YES 2 = NO

Midterm Coding for Semi-Structured Interviews with Child's Primary Caregiver (Deployment Condition)

1. *Let me make sure my information is correct. You are "child's name":*

- a=01 (child's father)
- b=02 (child's maternal grandmother)
- c=03 (child's paternal grandmother)
- d=04 (child's babysitter)
- e=05 (friend of mother)
- f=06 (other relative)
- g=07 (other)

*Note the final number must always be 2 digits.

2. *How long have you been the person most responsible for "child's name" care?*

Answer should appear in weeks (e.g., 4 months = 16 weeks)

* Note the final number must always be 2 digits (e.g., 16 weeks).

3. *With one being very little and seven being very much, how much experience would you say that you have in caring for young children?*

Number from 1 - 7

4. *With one being very uncomfortable and seven being very comfortable, how comfortable do you feel in caring for "child's name?"*

Number from 1 - 7

5a. *Did "child's name" respond to his/her mom leaving for deployment?*

1 = YES

2 = NO

5b. How did "child's name" respond when his/her mother initially left?

- 1 = crying/upset
- 2 = says he misses mother
- 3 = adjusts quickly/didn't notice much at first
- 4 = accepting of mother's absences
- 5 = no comment (regarding child's behavior)
- 6 = sleep problems
- 7 = aggressive behavior (hitting, biting, kicking, destructive behavior)

* Note that the child could have more than one code.

6. How has "child's name" reacted to his/her mother's absence in the last month?

- 1 = crying/upset
- 2 = asks questions ("when is she coming home?")
- 3 = wants mother when sick
- 4 = calls mother's name at night
- 5 = says he misses mother/says mom's name
- 6 = regression (wants to be held all the time)
- 7 = fussy/cranky
- 8 = sleep problems
- 9 = better adjustment to father/grandmother/primary caregiver
- 10 = no response to mother's absence

*Note that the child could have more than one code.

7. Is babysitter/daycare teacher the same?

- 1 = YES
- 2 = NO
- 3 = Primary caregiver is now both the primary caregiver *and* the child's babysitter

8a. Has "child's name's" doctor mentioned that he/she has any health problems (e.g., asthma/tonsillitis)?

- 1 = YES
- 2 = NO

8b. What health problems has "child's name's" child's doctor mentioned?

- 1 = asthma/breathing problems/disease
- 2 = ear infections
- 3 = colds/flu/viruses
- 4 = weight
- 5 = allergies
- 6 = no
- 7 = eye problems
- 8 = developmental disability

9 = internal problems

10 = developmental problems

* Note the child could have more than one code.

9a. *As compared to the past year, have you noticed any sudden changes in "child's name's" health in the past month?*

1 = yes

2 = no

9b. *What sudden changes have you noticed in "child's name's" health in the past month?*

1 = asthma/breathing problems/disease

2 = ear infections

3 = colds/flu/viruses

4 = sleeping problems

5 = diarrhea

6 = allergies

7 = no

8 = eating problems

9 = cyst

10 = better health

11 = injury

*Note the child could have more than one code.

10a. *During the past month, has "child's name's" babysitter/teacher mentioned any changes in "child's name's" behavior or disposition--how difficult/fussy/happy he or she has been?*

1 = yes

2 = no

10b. *What changes has your child's babysitter/teacher noticed in "child's name" during the past month?*

1 = temper tantrums

2 = negative behavior (e.g., talks back, grabs toys, terrible "twos", cranky, fussy, stubborn)

3 = positive personality changes/child independence/not relying on mother as much, funny

4 = positive relationship with babysitter

5 = prosocial behavior (sharing, helping)

6 = no

7 = aggressive behavior (e.g., hitting, biting, kicking)

8 = showing off

9 = regressive behavior (whining for mom)

10 = internalizing (withdrawn, crying, worried, anxiety, stressed)

*Note the child could have more than one code.

11a. *Have you noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been during the past month?*

1 = yes

2 = no

11b. *What changes in "child's name" have you noticed in the past month?*

1 = temper tantrums

2 = negative behavior/acting out (e.g., talking back, feisty, terrible "twos", cranky, fussy, stubborn)

3 = positive personality changes/child independence/not relying on mother as much, funny

4 = positive relationship with babysitter

5 = prosocial behavior (sharing, helping)

6 = regressive behavior (e.g., clinging, bedwetting again, etc.)

7 = child having problems with mother's boyfriend

8 = separation from Navy father difficult (due to father's deployment)

9 = no

10 = aggressive behavior (e.g., hitting, biting, kicking)

11 = changes in eating

12 = changes in sleeping

13 = internalizing (withdrawn, crying, worried, anxious, stressed)

*Note the child could have more than one code.

Appendix W

Coding for Midterm Interview (Control Subjects)

Is babysitter the same? 1 = YES 2 = NO

Has "child's name's" doctor mentioned that he/she has any health problems (e.g., asthma/tonsillitis)?

2a. 1 = yes, 2 = no

What health problems has child's doctor mentioned?

2b. 1 = asthma/breathing problems/disease/epilepsy(seizure disorders)

 2 = ear infections

 3 = colds/flu/viruses

 4 = weight

 5 = allergies

 6 = no

 7 = eye problems

 8 = developmental disability

 9 = internal problems

 10 = developmental problems

 11 = injury

* Note the child could have more than one code.

As compared to the past year, have you noticed any sudden changes in "child's name's" health in the past month?

2c. 1 = yes 2 = no

What sudden changes have you noticed in "child's name's" health in the past month?

2d. 1 = asthma/breathing problems/disease/epilepsy

 2 = ear infections/eye infections/ringworm

 3 = colds/flu/viruses

 4 = sleeping problems

 5 = diarrhea

 6 = allergies

 7 = no

 8 = eating problems

 9 = cyst

 10 = better health

 11 = injury

*Note the child could have more than one code.

During the past month, has "child's name's" babysitter/teacher mentioned any changes in "child's name's" behavior or disposition--how difficult/fussy/happy he or she has been?"

3a. 1 = yes, 2 = no

What changes has "child's name's" babysitter/teacher mentioned?

- 3b. 1 = temper tantrums
2 = negative behavior (e.g., talks back, grabs toys, terrible "twos")
3 = positive personality changes/child independence/not relying on mother as much/funny
4 = positive relationship with babysitter
5 = prosocial behavior (sharing, helping)
6 = no
7 = aggressive behavior (e.g., hitting, biting, kicking)
8 = showing off
9 = regressive behavior (whining for mom)
10 = internalizing (withdrawn, crying, worried, anxious, stressed)

*Note the child could have more than one code.

Have you noticed any changes in "child's name's" behavior or temperament--his/her disposition--how difficulty/fussy/happy he/she has been during the past month?

4a. 1 = yes, 2 = no

What changes in "child's name's" behavior or temperament have you noticed in the past month?

- 4b. 1 = temper tantrums
2 = negative behavior/acting out (e.g., talking back, feisty, terrible "twos", cranky, fussy, stubborn)
3 = positive personality changes/child independence/not relying on mother as much/funny
4 = positive relationship with babysitter
5 = prosocial behavior (sharing, helping)
6 = regressive behavior (e.g., clinging, bedwetting again, etc.)
7 = child having problems with mother's boyfriend
8 = separation from Navy father difficult (due to father's deployment)
9 = no
10 = aggressive behavior (e.g., hitting, biting)
11 = changes in eating
12 = changes in sleeping
13 = internalizing (withdrawn, crying, worried, anxious, stressed)

*Note the child could have more than one code.

Appendix X

Coding for Semi-Structured Maternal Interviews (Deployment Subjects = Final Interview)

Care for child at work?

- 1a. a=01
 b=02
 c=03
 d=04
 e=05
 f=06
 g=07
 h=08
 i=09
 j=10

*Note the final number must always be 2 digits.

Child care provider licensed?

- 1b. Yes = 1
 No = 2

Pay for child care arrangement?

- 1c. Number from \$000 (e.g., 080 for \$80, 100 for \$100)

*Note the final number must always be 3 digits

Total amount for child care?

- 1d. Number from \$000 (pays nothing up, e.g., 120 for \$120 for *ALL child care for target child per week*)

*Note the final number must always be 3 digits

*Total amount for **all** children?*

- 1e. Number from \$000 (pays nothing for all children, e.g., 200 for \$200 for *ALL children per week*)

* Note the final number must always be 3 digits

Hours per week?

- 1f. Hours per week (e.g., 40)

* Note the final number must always be 2 digits

Weeks per year?

- 1g. Weeks per year (e.g., 50)

* Note the final number must always be 2 digits

Travel time to day care

1h. Travel time (in minutes) (e.g., 25 each way = 50)

* Note the final number must always be 2 digits

Comfort with the quality of the care your child receives?

1i. Number from 1 to 9

Have many different babysitters have you had in the last month?

1j. Number of different babysitters in last year

How long with current babysitter?

1k. Convert length of time into months (e.g., 1 yes = 12 months; 2 weeks or less = 0 --Range = 00 to 84)

* Note the length of time must be in 2 digits

Babysitter change while on deployment?

1l. 1 = YES

2 = NO

Have many different babysitters while on deployment?

1m. Number from 0 -9

Guilty about leaving child to go to work?

1n. 1 = YES

2 = NO

Have difficult has child care been?

1o. Number from 0 - 9

Difficulty of child care?

1p. Number from 0 - 9

Time away from work due to child care arrangements?

1q. Number of days (e.g., 4 days = 04; 2 weeks = 14 days)

*Note the number must be in 2 digits

Comments about child care?

- 1r. 1 = Flexible hours (e.g., more night hours; more morning hours)
2 = cost (high/expensive)
3 = concerns about provider (e.g., love them like mother does; at-home care providers need to be monitored/quality for price)
4 = environmental concerns (e.g., food, no. of other children, are they getting enough attention)
5 = availability of child care (e.g., hard to find)
6 = waiting list for Navy child care
7 = no
8 = positive comments
9 = cost is low
10 = mothers should stay home with child as long as possible
11 = distance from work
12 = alternative to daycare when child is sick

*Note the participant could have **more than** one code.

* Must always have 2 numbers (e.g., 01)

Primary caregiver during the deployment

- 2a. a=01
b=02
c=03
d=04
e=05
f=06
g=07
h=08
i=09
j=10

*Note the final number must always be 2 digits.

Comfortable with quality of child care from primary caregiver?

- 2b. Number from 0 - 9

Guilty about going on deployment?

- 2c. 1 = yes, 2 = no

How much guilt did the mother feel about leaving to go on deployment?

- 2d. Number from 0 - 9

Did primary caregiver change during the deployment?

- 2e. 1 = Yes
2 = No

Prior to deployment, did you suspect that "primary caregiver" might not work out?

- 2f. 1 = Yes
2 = No

Did you request emergency leave to make new arrangements?

- 2g. 1 = Yes
2 = No

Was emergency leave granted?

- 2g(2) 1 = Yes
2 = No

Did you use any Navy services during the transition from one caregiver to another?

- 2h. 1 = Yes
2 = No

2h (2) *If yes, which ones?*

- 1 =
2 =
3 =
4 =
5 =

How was a new caregiver found?

- 2i. 1 teacher stayed with child at home
2 =
3 =
4 =
5 =

How difficult was getting someone to care for "child's name" during the deployment?

- 2j. number from 1 - 7

- 3a. *What effect do you think the long-term deployment had on your immediate family?*
- | | <i>Target child</i> | <i>Other siblings</i> |
|------|---|---------------------------------------|
| 1.1 | Regression/clingy/wants more affection | 2.1 more maturity |
| 1.2 | Child doesn't want mom in Navy | 2.2 lowered self-confidence |
| 1.3 | Child did well overall | 2.3 primary attachment figure changed |
| 1.4 | Child did not recognize mother | |
| 1.5 | Primary attachment figure changed (to father/grandmother/other adult) | |
| 1.6 | Lowered child's self-confidence | |
| 1.7 | More independent/took more responsibility | |
| 1.8 | More emotionally expressive | |
| 1.9 | Long-term separation anxiety | |
| 1.10 | Child matured emotionally | |

Grandparents

- 3.1 Hard on grandparents
3.2 Child got to spend time with grandparents

Mom

- 4.2 Mother missed child

Father

- 5.1 hard on father
5.2 father became very stressed at home and/or work
5.3 father lost weight

Family

- 6.1 Stressful/Anxiety
6.2 Family did well

3b. *Most difficult thing about deployment*

- 1 Leaving child/not seeing child
- 2 separation from family
- 3 Missing child
- 4 Worrying about child
- 5 Barriers in communication
- 6 Communication misunderstanding

3c. *Best thing about deployment*

- 1 Traveling
- 2 returning to the child
- 3 friendships at sea
- 4 enjoyed the work
- 5 work accomplishments

- 6 renewed interest in mothering
- 7 renewed interest in wife role

Total time away from your child in the last year because of work separations/deployments?

4a. must be in days (e.g., 6 months = 240 days)

*Note the responses must be a 3 digit number.

Last time you were away from your child because of work?

4b. must be in days (e.g., 1 month = 030 days)

*Note the responses must be a 2 digit number.

As compared to the past year, were there any sudden changes in "child's name's" health while you were on deployment?

- 5a. 1 = Yes
- 2 = No

Sudden changes in "child's name's" health took place while you were on deployment?

- 5b. 1 = child grew
- 2 = asthma
- 3 = no

As compared to the past year, were there any sudden changes in "child's name" since you returned from deployment?

- 5c. 1 = Yes
- 2 = No

What sudden changes in "child's name's" health have you noticed since you returned from deployment?

- 5d. 1 = no
- 2 =
- 3 =
- 4 =
- 5 =

As compared to the past year, did "child's name's" babysitter/teacher mention any changes in "child's name's" behavior or disposition?

- 6a. 1 = Yes
- 2 = No

What changes did your child's babysitter/teacher notice in "child name" while you were gone on deployment?

- 6b. 1 = illness
- 2 = disobedient at school

- 3 = clingy/regression
- 4 = fussy/cranky/frustrated
- 5 = crying
- 6 = temper tantrums
- 7 = misses mom
- 8 = none
- 9 = sleeping problems

Since you returned from deployment, has "child's name's" babysitter/teacher mentioned any changes in "child's name's" behavior or disposition?

- 6c. 1 = yes
 2 = no

What changes has your child's babysitter/teacher noticed in "child's name" since you returned from deployment?

- 6d. 1 = happier
 2 = more independent
 3 = talks more/better communication
 4 = more active
 5 = shows mother what she can do
 6 = none

Have you noticed any changes in "child's name's" behavior or temperament--his/her disposition?

- 7a. 1 = Yes
 2 = No

What changes in "child's name" have you noticed since you returned from deployment?

- 7b. 1 = reluctant towards mom
 2 = regression/clingy
 3 = separation anxiety
 4 = frustrated/angry
 5 = crying
 6 = no
 7 = child can't express self
 8 = positive changes (talks more, more active, more independent)

How has "child's name" responded to you since you got back from deployment?

- 7c. 1 = reluctant towards mom
 2 = wants physical proximity to mom/demanding/wants attention
 3 = more talkative
 4 = recognized mom
 5 = very loving/plays/affectionate
 6 = no problems/wonderful

- 7 = not as dependent on mom/more independent
8 = separation anxiety

Have you noticed any changes in your relationship with "child's name" since you got back from deployment?

- 7d. 1 = more patience toward child
2 = wants to spend more time w/child
3 = closer to child
4 = mom feels rejected by child's independence
5 = no

Did anything happen to "child's name" or any event occur that could have negatively impacted "child's name" during the deployment?

- 7e. 1 = Yes
2 = No

What happened?

- 7f. 1 = medical emergency
2 = father had work-related separation

How did you handle this event?

- 7g. 1 = mom was angry
2 = felt helpless
3 =
4 =

When event happened did you involve the people in your chain of command?

- 7h. 1 = yes
2 = no

How supportive were the people in your chain of command?

- 7i. number from 1 - 7

8a-8g. Maternal Role Investment
code as per instructions on the MRIS

8h. *In your opinion what is the best age for a woman to have her first child?*
code in years

8i. In your opinion, what is the best time for a Navy woman to have her first child?

1 = anytime

2 = on sea duty

3 = on shore duty

4 = after making Petty officer

5 = other

6 = shore duty and after making Petty Officer

Satisfied with emotional support from "child's father"?

9a. number from 1 - 7

Satisfied with emotional support from family members?

9b. number from 1 - 7

Satisfied with emotional support from just friends?

9c. number from 1 - 7

Satisfied with practical support from "child's father"?

9d. number from 1 - 7

Satisfied with practical support from family members?

9e. number from 1 - 7

Satisfied with the practical support from just friends?

9f. number from 1 - 7

Quality of relationship with "child's" father?

10. number from 1 - 7

How much contact has "child's name" had with his or her father?

11. a = 1

b = 2

c = 3

d = 4

e = 5

f = 6

g = 7

h = 8 Once or twice since child was born. Note that this does NOT appear on the interview.

Deployment worthwhile in terms of your Navy job?

12. 1 = Yes

2 = No

Did you gain new skills or knowledge as a result of the deployment?

13. 1 = Yes
2 = No

Do you feel more "integrated" into the Navy now?

14. 1 = Yes
2 = No

Did your plans for staying in/leaving the Navy change?

15. 1 = Yes
2 = No

How have your plans for staying in/leaving the Navy changed?

- 15b. 1 = decided to retire
2 = may get out, was not happy on ship

How likely will you be to reenlist at your EAOS?

16. number form 1 - 7

Why do you plan to leave/stay in the Navy?

17. 1 = Benefits
2 = Job Security/Steady Pay
3 = Career
4 = Retirement
5 = Travel
6 = Satisfied/Happy with Navy
7 = Sea Duty Coming Up
8 = Demands of Being a Mother and Being in the Navy too difficult
9 = Want to be a "Full-time Mom"
10 = Bad Work Environment (e.g., C.O./boss is a problem)
11 = Field is Closed (e.g., wants to go into nursing but no "slots" are available)
12 = Getting out to go to school
13 = Staying in to go to school
14 = Don't like Navy/Dissatisfied with Navy
15 = Depends on orders
16 = Hard on family
17 = Hard on marriage
18 = Good housing
19 = training
20 = change career
21 = bad pay
22 = keeps respondent off welfare
23 = being separated from the Navy

24 = mother wants more flexible hours

*Note the participant could have **more than** one code.

Please rate your overall Navy experiences up to this point in your career?

18. Number from 1 - 7

Do you think that the Navy policy regarding women at sea should be changed?

19. 1 = Yes

2 = No

If yes, how?

20.

Appendix Y

Coding for Semi-Structured Maternal Interviews (Control Subjects = Final Interview)

Who typically cares for "child's name?"

- 1a. a=01
- b=02
- c=03
- d=04
- e=05
- f=06
- g=07
- h=08
- i=09
- j=10

*Note the final number must always be 2 digits.

Is this a licensed provider?

- 1b. Yes = 1
- No = 2

How much per week for the target child?

- 1c. Number from \$000 (e.g., 080 for \$80, 100 for \$100)

*Note the final number must always be 3 digits

Total amount of child care per week for the target child?

- 1d. Number from \$000 (pays nothing up, e.g., 120 for \$120 for *ALL child care for target child per week*)

*Note the final number must always be 3 digits

Total amount per week for all children?

- 1e. Number from \$000 (pays nothing for all children, e.g., 200 for \$200 for *ALL children per week*)

* Note the final number must always be 3 digits

How many hours does she work per week?

- 1f. Hours per week (e.g., 40)

* Note the final number must always be 2 digits

How many weeks does she work per year?

- 1g. Weeks per year (e.g., 50)

* Note the final number must always be 2 digits

Travel time (in minutes) to reach child care provider?

1h. Travel time (in minutes) (e.g., 25 each way = 50)

* Note the final number must always be 2 digits

How comfortable is she with the quality of the care her child receives while at work?

1i. Number from 1 to 9

How many different full-time babysitters/daycare teachers in the last year?

1j. Number of different babysitters in last year

How long has child been with his/her current babysitter/daycare teacher?

1k. Convert length of time into months (e.g., 1 yes = 12 months; 2 weeks or less = 0 --Range = 00 to 84)

* Note the length of time must be in 2 digits

Did the babysitter change since the very first time we interviewed her?

1l. 1 = YES

2 = NO

How many different babysitters has "child's name" had since the first time we interviewed you?

1m. Number from 0 -9

Do you ever feel guilty about leaving "child's name" to go to work?

1n. 1 = YES

2 = NO

How much guilt do you feel about leaving "child's name" to go to work?

1o. Number from 0 - 9

Overall, how difficult has child care been?

1p. Number from 1 - 7

Approximately how much time have you missed from work during the past year from difficulties due to child care arrangements?

Number of days (e.g., 4 days = 04; 2 weeks = 14 days)

*Note the number must be in 2 digits

Comments/concerns, or suggestions about child care?

- 1r. 1 = Flexible hours (e.g., more night hours; more morning hours)
2 = cost (high/expensive)
3 = concerns about provider (e.g., love them like mother does; at-home care providers need to be monitored/quality for price)
4 = environmental concerns (e.g., food, no. of other children, are they getting enough attention)
5 = availability of child care (e.g., hard to find)
6 = waiting list for Navy child care
7 = no
8 = positive comments
9 = cost is low
10 = mothers should stay home with child as long as possible
11 = distance from work
12 = alternative to daycare when child is sick

*Note the participant could have **more than** one code.

* Must always have 2 numbers (e.g., 01)

Total time away from child in the last year

- 2a. must be in days (e.g., 6 months = 240 days)

*Note the responses must be a 3 digit number.

Last time away from child because of work

- 2b. must be in days (e.g., 1 month = 030 days)

*Note the responses must be a 2 digit number.

How long were you away from your child the last time?

- 2c. in days (e.g., 1 month = 030 days)

Has the child's doctor mentioned any health problems?

- 3a. 1 = Yes
2 = No

What health problems has child's doctor mentioned?

- 3b. 1 = child grew
2 = asthma
3 = no

Compared to the past year, have you noticed any sudden changes in child's health in the past month?

- 3c. 1 = Yes
2 = No

What sudden changes have you noticed in "child's name" health in the past month?

- 3d. 1 =
2 =
3 =
4 =
5 =
6 =

Babysitter/teacher mentioned any changes in "child's name" behavior or disposition?

- 4a. 1 = yes
2 = no

What changes has child's babysitter/teacher noticed in "child's name" during the past month?

- 4b. 1 = happier
2 = more independent
3 = talks more/better communication
4 = more active
5 = shows mother what she can do
6 = none

Have you noticed any changes in "child's name" behavior or temperament--his/her disposition --how difficult/fussy, etc. during the past month?

- 5a. 1 = Yes
2 = No

What changes in "child's name" have you noticed in the past month?

- 5b. 1 = reluctant towards mom
2 = regression/clingy
3 = separation anxiety
4 = frustrated/angry
5 = crying
6 = none
7 = child can't express self
8 = positive changes (talks more, more active, more independent)

6a-6g. Maternal Role Investment
code per instructions on the MRIS

6h. *What is the best age for a woman to have her first child?*
code in years

In your opinion, in trying to balance the responsibilities of motherhood and a Navy enlistment/career, what is the best time for a Navy woman to have her first child?

- 6i. a = 1
 b = 2
 c = 3
 d = 4
 e = 5
 f = 6 (on sea duty and after making Petty Officer--NOTE this does not appear on the survey)

Satisfied with emotional support from child's father?

- 7a. number from 1 - 7

Satisfied with the emotional support from family members?

- 7b. number from 1 - 7

Satisfied with the emotional support from just friends?

- 7c. number from 1 - 7

Satisfied with the practical support from child's father?

- 7d. number from 1 - 7

Satisfied with the practical support from family members?

- 7e. number from 1 - 7

Satisfied with the practical support from just friends?

- 7f. number from 1 - 7

Quality of relationship with child's father

8. number from 1 - 7

Contact with child's father

9. a = 1
 b = 2
 c = 3
 d = 4
 e = 5
 f = 6
 g = 7
 h = 8 Once or twice since child was born. Note that this does NOT appear on the interview.

Have plans changed for staying in/leaving the Navy?

- 10a. 1 = Yes
2 = No

How?

- 10b. 1 = decided to retire
2 = may get out, was not happy on ship

How likely to reenlist?

11. number form 1 - 7

Why do you plan to leave/stay in/not sure?

12. 1 = Benefits
2 = Job Security/Steady Pay
3 = Career
4 = Retirement
5 = Travel
6 = Satisfied/Happy with Navy
7 = Sea Duty Coming Up
8 = Demands of Being a Mother and Being in the Navy too difficult
9 = Want to be a "Full-time Mom"
10 = Bad Work Environment (e.g., C.O./boss is a problem)
11 = Field is Closed (e.g., wants to go into nursing but no "slots" are available)
12 = Getting out to go to school
13 = Staying in to go to school
14 = Don't like Navy/Dissatisfied with Navy
15 = Depends on orders
16 = Hard on family
17 = Hard on marriage
18 = Good housing
19 = Training
20 = Change career
21 = bad pay
22 = Keeps respondent off welfare
23 = Being separated from the Navy
24 = Mother wants more flexible hours

*Note the participant could have more than one code.

Rate overall Navy experience

13. Number from 1 - 7

Navy policy regarding women at sea should be changed?

14. 1 = Yes
2 = No

If yes, how?

- 14b. 1 =
2 =
3 =
4 =
5 =